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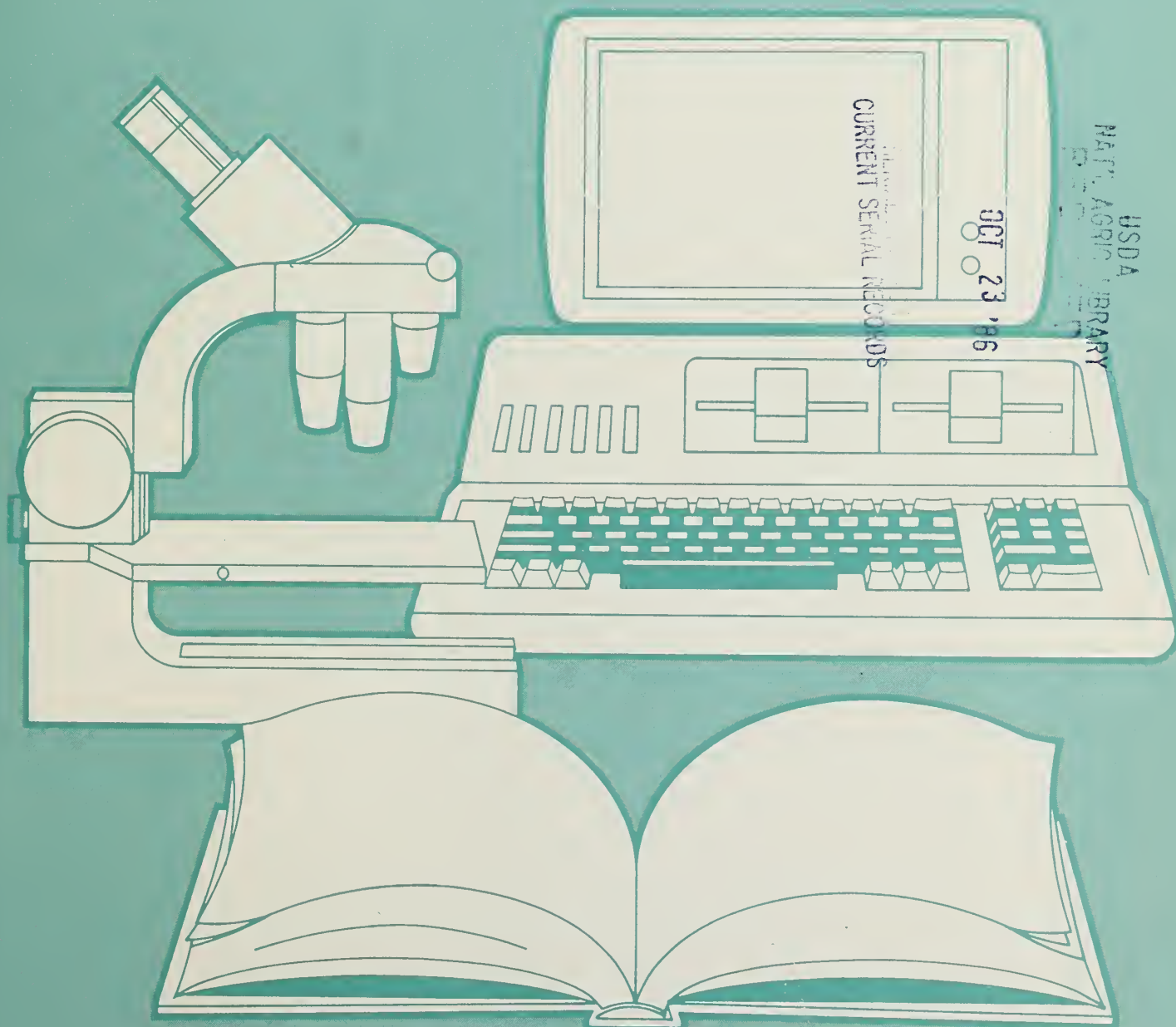
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Bibliographies  
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of Agriculture  
Number 52

# The Protection of Hays: 1979-85

## Citations from Agricola Concerning Diseases and Other Environmental Considerations



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# The Protection of Hays: 1979-85

## Citations from Agricola Concerning Diseases and Other Environmental Considerations

Compiled and Edited by  
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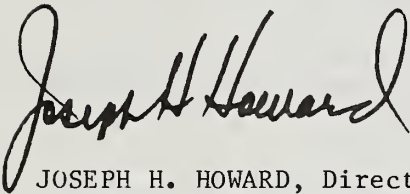
## FOREWORD

This is the 11th volume in a series of commodity-oriented environmental bibliographies resulting from a memorandum of understanding between the United States Department of Agriculture, National Agricultural Library (USDA-NAL), and the Environmental Protection Agency, Office of Pesticide Programs (EPA-OPP).

This close working relationship between the two agencies will produce a series of bibliographies which will be useful to EPA in the regulation of pesticides, as well as to any researcher in the field of plant or commodity protection. The broad scope of information contained in this series will benefit USDA, EPA, and the agricultural community as a whole.

The sources referenced in these bibliographies include the majority of the latest available information from United States publications involving commodity protection throughout the growing and processing stages for each agricultural commodity.

We welcome the opportunity to join this cooperative effort between USDA and EPA in support of the national agricultural community.



JOSEPH H. HOWARD, Director  
National Agricultural Library



DOUGLAS D. CAMPT, Director  
Office of Pesticide Programs



## INTRODUCTION

The citations in this bibliography are selected from works by U.S. authors on all aspects of conservation tillage. All citations are derived from AGRICOLA (AGRICultural Online Access), the family of databases compiled by the National Agricultural Library and its cooperators.

This is the 11th bibliography included in a series of commodity-oriented environmental databases jointly sponsored by the National Agricultural Library, United States Department of Agriculture (USDA-NAL), and the Office of Pesticides Programs, Environmental Protection Agency (EPA-OPP). Additional volumes issued recently or planned for the immediate future concern protection of corn, soybeans, pome fruits, stone fruits, grain sorghum, rice, and peanuts.

Entries in the bibliography are subdivided into a series of subject headings used in the table of contents of the Bibliography of Agriculture and in the National Agricultural Library Catalog. Each citation appears under the subject heading assigned to the particular item. A complete author index is also included in the publication.

The Office of Pesticide Programs, EPA, has furnished technical assistance to the compiler through members of a commodity-oriented environmental data team which included:

Charles D. Reese  
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## RESEARCH

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0002

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0006

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0007

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0008

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# GRADING, STANDARDS, LABELLING

0011 0012

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## (PLANT PRODUCTION - FIELD CROPS)

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**Investigations on distribution, growth rate, resistance to, and host range of race 1 and 2 of Colletotrichum trifolii (Anthracnose, alfalfa).**  
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## (PLANT BREEDING)

0125

**Performance and chemical composition of 18 nondormant alfalfa cultivars at the Lajas Valley (*Medicago sativa*, forage yield and nutritive value).**

Velez-Santiago, J. JAUPA. Arroyo-Aguilu, J.A.; Torres-Rivera, S.; Juarbe, N.C. Rio Piedras : University of Puerto Rico, Agricultural Experiment Station. The Journal of agriculture of the University of Puerto Rico. July 1983. v. 67 (3). p. 204-212. Includes references. (NAL Call No.: 8 P832J).

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**Performance of alfalfa varieties during 1984.**

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0127

**Phenotypic recurrent selection for resistance to Phytophthora root rot in two diploid alfalfa populations.**

CRPSAY. Heisey, R.F. Murphy, R.P. Madison, Wis. : Crop Science Society of America. Crop science. July/Aug 1985. v. 25 (4). p. 693-694. ill. Includes references. (NAL Call No.: DNAL 64.8 C883).

0128

**Phytophthora root rot in well-established and seeding-year stands of alfalfa (*Medicago sativa* L.) (Variety comparisons, Michigan).**

Tesar, M.B. East Lansing : The Station. Research report - Michigan State University, Agricultural Experiment Station. Jan 1983. Jan 1983. (444). p. 213-223. ill. 9 ref. (NAL Call No.: 284.9 M58).

0129

**A pink pea aphid (*Acyrtosiphon pisum*) biotype on alfalfa.**

Kugler, J.L. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC - United States Dept. of Agriculture, Science and Education Administration. Agricultural Research. North Central Region. May 1981. May 1981. (19). p. 68. 1 ref. (NAL Call No.: AS21.A75U69).

0130

**Pollination of lucerne in enclosures (Genotypes, insect pollinators).**

Ptacek, V. (s.l.) : Agricultural Research Service, U.S. Dept. of Agriculture. Report of the ... Alfalfa Improvement Conference. Dec 1983. Includes abstract. Dec 1983. (28th). p. 67-68. (NAL Call No.: 60.9 AL2).

0131

**Population variability in the reaction of alfalfa to alfalfa bud mite (*Eriophyes medicaginis*).**

Ridland, P.M. Halloran, G.M. Madison, Wis., Crop Science Society of America. Crop science. Nov/Dec 1980. v. 20 (6). p. 755-757. ill. 3 ref. (NAL Call No.: 64.8 C883).

0132

**Progress in selecting for resistance to *Stemphylium botryosum* (cool-temperature biotype) in alfalfa (Cultivars).**

Gilchrist, D.G. CRPSA. Teuber, L.R.; Martensen, A.N.; Cowling, W.A. Madison : Crop Science Society of America. Crop science. Nov/Dec 1982. v. 22 (6). p. 1155-1159. ill. 17 ref. (NAL Call No.: 64.8 C883).

0133

**Recommended alfalfa varieties for Michigan.**

Tesar, M. B. 1978. This publication discusses desirable characteristics for alfalfa varieties in Michigan and includes tables of several test results. Document available from: Michigan State University, Bulletin Office, P.O. Box 231, East Lansing, MI 48824. 6 p. : ill. (NAL Call No.: Not available at NAL.). (NAL Call No.: E 1098).

0134

**Red clover cultivar tests (Reaction to southern anthracnose disease, *Colletotrichum trifolii*).**

Schoen, J.F. Payne, R.C. (S.l.) : The Association. The Newsletter of the Association of Official Seed Analysts. Feb 1984. v. 58 (1). p. 58-64. Includes references. (NAL Call No.: 61.9 AS7N).

0135

**Registration of Daneb I, Daneb I BW1, and Daneb I P2, alfalfa germplasms with multiple pest resistance (*Pseudopeziza medicaginis*, *Pseudopeziza jonesii*, *Cercospora medicaginis*).**

Kehr, W.R. Rumbaugh, M.D.; Semeniuk, G.; Barnes, D.K.; Frosheiser, F.I.; Manglitz, G.R.; Boe, A.A. Madison, Wis. : Crop Science Society of America. Crop science. Sept/Oct 1984. v. 24 (5). p. 1001. Includes 1 references. (NAL Call

No.: 64.8 C883).

0136

**Registration of 'Dona Ana' alfalfa.**  
CRPSAY. Melton, B. Miller, D.; Teuber, L.; Walton, M. Madison, Wis. : Crop Science Society of America. Crop science. July/Aug 1985. v. 25 (4). p. 705. Includes 2 references. (NAL Call No.: DNAL 64.8 C883).

0137

**Registration of 'endure' alfalfa.**  
CRPSAY. Moutray, J.B. Hartman, W.G.; Haight, J.C. Madison, Wis. : Crop Science Society of America. Crop science. July/Aug 1985. v. 25 (4). p. 705. (NAL Call No.: DNAL 64.8 C883).

0138

**Registration of 'Flare' red clover.**  
CRPSAY. Moutray, J.B. Harding, J.H. Madison, Wis. : Crop Science Society of America. Crop science. July/Aug 1985. v. 25 (4). p. 707-708. Includes 1 references. (NAL Call No.: DNAL 64.8 C883).

0139

**Registration of 'Morred' red clover.**  
CRPSAY. Moutray, J.B. Mansfield, J.L.; Haight, J.C. Madison, Wis. : Crop Science Society of America. Crop science. July/Aug 1985. v. 25 (4). p. 708. Includes 1 references. (NAL Call No.: DNAL 64.8 C883).

0140

**Registration of N.S. 72 P2, N.S. 75 P2, N.S. 78 P2, and N.S. 81 P2PA1SAA1 alfalfa germplasms with multiple pest resistance (Breeding for resistance to insect pests).**  
Kehr, W.R. Barnes, D.K.; Frosheiser, F.I.; Manglitz, G.R. Madison, Wis. : Crop Science Society of America. Crop science. Sept/Oct 1984. v. 24 (5). p. 1002-1003. Includes 1 references. (NAL Call No.: 64.8 C883).

0141

**Registration of N.S. 76 P2PA1 and N.S. 86 alfalfa germplasms resistant to potato leafhopper yellowing.**  
Kehr, W.R. Manglitz, G.R. Madison, Wis. : Crop Science Society of America. Crop science. Sept/Oct 1984. v. 24 (5). p. 1003-1004. Includes 1 references. (NAL Call No.: 64.8 C883).

0142

**Registration of N.S. 77 SN2AN2 and N.S. 79 SN2AN2 alfalfa germplasms with multiple pest resistance (Empoasca fabae, foliar, viral diseases).**  
Kehr, W.R. Hartman, B.J.; Hunt, D.J.; Manglitz, G.R.; Thyr, B.D. Madison, Wis. : Crop Science Society of America. Crop science. Sept/Oct 1984. v. 24 (5). p. 1004. Includes 1 references. (NAL Call No.: 64.8 C883).

0143

**Registration of NMP-8 CKS5 nondormant common leaf spot resistant alfalfa germplasm (Medicago sativa, Pseudopeziza medicaginis).**  
Thyr, B.D. Hunt, D.J.; Hartman, B.J.; McCoy, T.J.; Knous, T.R. Madison, Wis. : Crop Science Society of America. Crop science. Mar/Apr 1982. v. 22 (2). p. 449-450. (NAL Call No.: 64.8 C883).

0144

**Registration of red clover germplasm resistant to bean yellow mosaic virus.**  
CRPSAY. Taylor, N.L. Diachun, S.; Ghabrial, S.A. Madison, Wis. : Crop Science Society of America. Crop science. July/Aug 1985. v. 25 (4). p. 714-715. Includes 5 references. (NAL Call No.: DNAL 64.8 C883).

0145

**Registration of 'Redland II' red clover.**  
CRPSAY. Moutray, J.B. Mansfield, J.L. Madison, Wis. : Crop Science Society of America. Crop science. July/Aug 1985. v. 25 (4). p. 708. (NAL Call No.: DNAL 64.8 C883).

0146

**Registration of W10AnWfUpPy3, (B2An4 X Arc)AnWfUpPy3, and B28 multiple pest resistant alfalfa germplasms (Medicago sativa).**  
Elgin, J.H. Jr. Ostazeski, S.A. Madison, Wis. : Crop Science Society of America. Crop science. May/June 1984. v. 24 (3). p. 623. Includes references. (NAL Call No.: 64.8 C883).

0147

**Resistance in alfalfa to a red form of the pea aphid (Homoptera: Aphididae) (Acyrthosiphon pisum, Medicago sativa).**  
Kugler, J.L. Ratcliffe, R.H. College Park, Md. : Entomological Society of America. Journal of economic entomology. Feb 1983. v. 76 (1). p. 74-76. Includes references. (NAL Call No.: 421 J822).



## (PLANT BREEDING)

0148

**Resistance to race 1: a prerequisite for induced resistance to race 2, by race 1 of *Colletotrichum trifolii*, on alfalfa.**  
Ostazeski, S.A. Elgin, J.H. Jr. (s.l.) : Agricultural Research Service, U.S. Dept. of Agriculture. Report of the ... Alfalfa Improvement Conference. Dec 1983. Includes abstract. Dec 1983. (28th). p. 43. (NAL Call No.: 60.9 AL2).

0149

**Resistance to the spotted alfalfa aphid (Homoptera: Aphididae) in glandular-haired *Medicago* species (*Therioaphis maculata*).**  
Ferguson, S.EVETB. Sorensen, E.L.; Horber, E.K. College Park : Entomological Society of America. Environmental entomology. Dec 1982. v. 11 (6). p. 1229-1232. Includes references. (NAL Call No.: QL461.E532).

0150

**Screening efficacy of spotted alfalfa aphid biotypes and genic systems for resistance in alfalfa (*Therioaphis maculata*).**  
Nielson, M.W.EVETB. Kuehl, R.O. College Park : Entomological Society of America. Environmental entomology. Oct 1982. v. 11 (5). p. 989-996. Includes references. (NAL Call No.: QL461.E532).

0151

**Screening for three-cornered alfalfa hopper resistance (*Spissistilus festinus*, cultivar resistance).**  
Kadir, M.A. Harville, B.G.; Smith, C.M. Baton Rouge : The Department. Report of projects - Louisiana Agricultural Experiment Station; Department of Agronomy. 1982. 1982. p. 268-269. (NAL Call No.: 100 L936).

0152

**Selection for root and crown rot resistance in alfalfa (*Fusarium* spp.).**  
Richard, C. Michaud, R.; Freve, A.; Gagnon, C. Madison, Wis., Crop Science Society of America. Crop science. Nov/Dec 1980. v. 20 (6). p. 691-695. 111. 13 ref. (NAL Call No.: 64.8 C883).

0153

**Selection for yellow clover aphid (*Therioaphis trifolii*) and pea aphid (*Acyrtosiphon pisum*) resistance in red clover (Cultivars and strains).**  
Gorz, H.J. Manglitz, G.R. Madison, Crop Science Society of America. Crop science. Mar/Apr 1979. v. 19 (2). p. 257-260. 111. 10 ref. (NAL Call

No.: 64.8 C883).

0154

**Self- and cross-fertility in alfalfa populations before and after selection for pest resistance.**

Rodriguez, J.A. Kehr, W.R. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC - United States Dept. of Agriculture, Science and Education Administration. Agricultural Research. North Central Region. May 1981. May 1981. (19). p. 60. (NAL Call No.: aS21.A75U69).

0155

**Spotted alfalfa aphid (*Therioaphis maculata* (Buckton)) (Homoptera: Aphididae): water stress, amino acid content, and resistance (Alfalfa varieties).**  
DeVries, N.E.L. Manglitz, G.R. Lawrence, Kan., The Society. Journal of the Kansas Entomological Society. Jan 1982. v. 55 (1). p. 57-64. Includes 10 ref. (NAL Call No.: 420 K13).

0156

**Standard tests to characterize pest resistance in alfalfa cultivars.**  
Beltsville, MD. U.S. Dept. of Agriculture, Agricultural Research Service for sale by Supt. of Docs. 1984. Cover title ~"Issued June 1984. ~Supersedes and enlarges ARS-NC-19, "Standard test to characterize pest resistance in alfalfa varieties," issued September 1974. ii, 38 p. : maps ; 28 cm. -. Bibliography: p. 33-36. (NAL Call No.: 1 Ag84M no.1434).

0157

**Trichomes and field resistance of *Medicago* species to the alfalfa seed chalcid (Hymenoptera: Eurytomidae) (*Bruchophagus rodii*).**  
Brewer, G.U.EVETB. Sorensen, E.L.; Horber, E.K. College Park : Entomological Society of America. Environmental entomology. Feb 1983. v. 12 (1). p. 247-251. 111. Includes references. (NAL Call No.: QL461.E532).

0158

**USDA protects 11 new seed varieties (Alfalfa, garden beans, soybeans, wheat, clover, ryegrass, tobacco).**  
Washington, D.C., The Office. Major news releases and speeches - United States Department of Agriculture, Office of Governmental and Public Affairs. Mar 26/Apr 2, 1982. Mar 26/Apr 2, 1982. p. 20-21. (NAL Call No.: aS21.A8U51).



0159

USDA protects 16 new seed varieties (Alfalfa, garden beans, soybeans, wheat).  
Washington, D.C., The Office. Major news releases and speeches - United States Department of Agriculture, Office of Governmental and Public Affairs. Mar 5/12, 1982. Mar 5/12, 1982. p. 18. (NAL Call No.: aS21.A8U51).

0160

Use of strain crosses in breeding multiple pest resistant alfalfa.

Elgin, J.H. Jr. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC - United States Dept. of Agriculture, Science and Education Administration. Agricultural Research. North Central Region. May 1981. May 1981. (19). p. 58. (NAL Call No.: aS21.A75U69).

0161

Use of strain crosses in the development of multiple pest resistant alfalfa with improved field performance (*Medicago sativa*, breeding methods, diseases, insects, nematodes).

Elgin, J.H. Jr. CRPSA. McMurtrey, J.E. III; Hartman, B.J.; Thyr, B.O.; Sorensen, E.L. Madison : Crop Science Society of America. Crop science. Jan/Feb 1983. v. 23 (1). p. 57-64. ill. Includes references. (NAL Call No.: 64.8 C883).

0162

Method of breeding clover for resistance to stem rot, *Sclerotinia trifoliorum* Erikss. I.

Basic investigations and phytopathological methodology in the breeding of clover for resistance to *Sclerotinia trifoliorum* Erikss. Wierzbicka, B. Warszawa, Panstwowe Wydawn. Rolnicze i Lesne. Hodowla roslin aklimatyzacja i nasiennictwo. Plant breeding, acclimatization and seed production. 1977. v. 21 (6). p. 511-536. ill. Bibliography p. 534-535. (NAL Call No.: 64.8 H66).

0163

**Genotype X environment interaction analysis for yield in alfalfa (*Medicago sativa*, disease resistance).**

Hill, R.R. Jr. CRPSAY. Baylor, J.E. Madison : Crop Science Society of America. Crop science. Sept/Oct 1983. v. 23 (5). p. 811-815. Includes references. (NAL Call No.: 64.8 C883).

# PLANT STRUCTURE

0164

**Alterations in chloroplast and cell membranes associated with cAMP-induced dissociation of starch grains in clover yellow mosaic virus infected clover.**

Tu, J.C. Ottawa. Canadian journal of botany. Feb 15, 1979. v. 57 (4). p. 360-369. ill. 16 ref. (NAL Call No.: 470 C16C).

0165

**The causes of yellows in alfalfa (*Medicago sativa* L.) and comparisons of green and yellow plants for their growth, vegetative establishment, mortality and chemical composition / by Om Parkash Vadhwa.**

Vadhwa, Om Parkash, 1941. 1970. Thesis (Ph.D.)--Utah State University, 1970. Photocopy. Ann Arbor, Mich. : University Microfilms, 1972. xix, 133 leaves ; 21 cm. Bibliography: leaves 106-110. (NAL Call No.: DISS 72-4,744).

0166

**The chemical identification of the glandular hair exudate from *Medicago scutellata* (Resistant to alfalfa weevils).**

Triebe, D.C. Meloan, C.E.; Sorensen, E.L. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC - United States Dept. of Agriculture, Science and Education Administration. Agricultural Research. North Central Region. May 1981. May 1981. (19). p. 52. (NAL Call No.: aS21.A75U69).

0167

**Electron microscopy of developing *Aphanomyces oogonia* and oospores (in alfalfa roots, Fungi).**

Traquair, J.A. McKeen, W.E. Bronx, N.Y., The New York Botanical Garden. Mycologia. Mar/Apr 1980. v. 72 (2). p. 378-394. ill. 32 ref. (NAL Call No.: 450 M99).

0168

**Histological examination of larval clover root curculio (Coleoptera: Curculionidae) damage to ladino white clover (*Trifolium repens*, *Sitona hispidulus*).**

Powell, G.S. JEENA. Campbell, W.V. College Park : Entomological Society of America. Journal of economic entomology. Aug 1983. v. 76 (4). p. 741-743. ill. Includes references. (NAL Call No.: 421 J822).

0169

**Structure of the keel-locking mechanism in insect pollinated and self-pollinated alfalfa species.**

CRPSAY. Kreitner, G.L. Sorensen, E.L. Madison, Wis. : Crop Science Society of America. Crop science. July/Aug 1985. v. 25 (4). p. 631-634. ill. Includes references. (NAL Call No.: DNAL 64.8 C883).

0170

**Changes in herbage chemical composition due to proportion of species in alfalfa-orchardgrass (*Dactylis glomerata*) mixtures.**  
Napatipul, J.A. Smith, D. New York, Dekker. Communications in soil science and plant analysis. 1979. v. 10 (3). p. 565-577. ill. 20 ref. (NAL Call No.: S590.C63).

0171

**Degradation of phenoxyalkylcarboxylic acids by white clover (*Trifolium repens*) cell suspensions (Herbicide tolerance, phytotoxicity).**  
Smith, A.E. Oswald, T.H. Champaign, Ill., Weed Science Society of America. Weed science. July 1979. v. 27 (2). p. 389-391. ill. 11 ref. (NAL Call No.: 79.8 W41).

0172

**Distribution of chemical constituents among shoot parts of timothy (*Phleum pratense*) and switchgrass (*Panicum virgatum*) at anthesis.**  
Smith, D. Greenfield, S.B. New York, Marcel Dekker. Journal of plant nutrition. 1979. v. 1 (1). p. 81-99. (NAL Call No.: QK867.J67).

0173

**Effects of herbicides on nitrogen fixation of alfalfa (*Medicago sativa*) and red clover (*Trifolium pratense*) (*Rhizobium*).**  
Peters, E.J. Ben Zbiba, M. Champaign, Ill., Weed Science Society of America. Weed science. Jan 1979. v. 27 (1). p. 18-21. ill. 7 ref. (NAL Call No.: 79.8 W41).

0174

**Effects of sulfur-coated (slow-release) urea on California annual grassland yield and chemical composition (*Bromus* sp., *Avena barbata*, *Erodium botrys*, clover).**  
Vaughn, C.E. Jones, M.B. Madison. Agronomy journal American Society of Agronomy. Mar/Apr 1979. v. 71 (2). p. 297-300. ill. 14 ref. (NAL Call No.: 4 AM34P).

0175

**Forage quality for sheep and chemical composition associated with sulfur fertilization on a sulfur deficient site (*Trifolium subterraneum*, *Lolium multiflorum*).**  
Jones, M.B. Rendig, V.V.; Torell, D.T.; Inouye, T.S. Madison, Wis., American Society of Agronomy. Agronomy journal. Sept/Oct 1982. v. 74 (5). p. 775-780. ill. 19 ref. (NAL Call No.: 4 AM34P).

0176

**Influence of P and K fertilization on phytophthora root rot or excess soil water injury of alfalfa cultivars.**  
CSOSA2. Alva, A.K. Lanyon, L.E.; Leath, K.T. New York, N.Y. : Marcel Dekker. Communications in soil science and plant analysis. Feb 1985. v. 16 (2). p. 229-243. Includes 15 references. (NAL Call No.: DNAL S590.C63).

0177

**Virus symptom-free plants of red clover using meristem culture.**  
Phillips, G.C. Collins, G.B. Madison, Crop Science Society of America. Crop science. Mar/Apr 1979. v. 19 (2). p. 213-216. ill. 15 ref. (NAL Call No.: 64.8 C883).



# PLANT PHYSIOLOGY AND BIOCHEMISTRY

0178

**Canavanine to arginine ratio in alfalfa (*Medicago sativa*), clover (*Trifolium*), and the jack bean (*Canavalia ensiformis*).**  
JAFCAU. Natelson, S. Washington, D.C. : American Chemical Society. Journal of agricultural and food chemistry. May/June 1985. v. 33 (3). p. 413-419. ill. Includes references. (NAL Call No.: DNAL 381 J8223).

0179

**The causes of yellows in alfalfa (*Medicago sativa* L.) and comparisons of green and yellow plants for their growth, vegetative establishment, mortality and chemical composition / by Om Parkash Vadhwa.**  
Vadhwa, Om Parkash, 1941. 1970. Thesis (Ph.D.)--Utah State University, 1970. Photocopy. Ann Arbor, Mich. : University Microfilms, 1972. xix, 133 leaves ; 21 cm. Bibliography: leaves 106-110. (NAL Call No.: DISS 72-4,744).

0180

**A comparison of methods to distinguish seeds of yellow sweetclover (*Melilotus officinalis* (L.) Lam.) and white sweetclover (*Melilotus alba* Medik.) (Chemical test).**  
Maxon, S.R.AOSNA. Hurst, S.J. (s.l.) : The Association. The Newsletter of the Association of Official Seed Analysts. Feb 1983. v. 57 (1). p. 46-53. Includes references. (NAL Call No.: 61.9 AS7N).

0181

**Hard seeds in legumes.**

Kinch, R. C. Sanderson, Elmer E. document available from: South Dakota State University, Ag. Information Bulletin Room, Extension Building, Brookings, South Dakota 57007 19--?. Hardseeds or seeds that have a waxy, protective coating is discussed in the publication. Alfalfa, sweet clover and red clover are the plant examples used. 1 sheet : ill. (NAL Call No.: Document available from source.). (NAL Call No.: FS 16).

0182

**Influence of changes in temperature on the growth and chemical composition of alfalfa (*Medicago sativa* L.) / by P.L. Greenfield.**  
Greenfield, P. L. (Peter Lorimer), 1945. 1972. Thesis (Ph.D.)--University of Wisconsin, 1972. Photocopy. Ann Arbor, Mich. : University Microfilms, 1973. vii, 136 leaves ; 22 cm. Bibliography: leaves 132-136. (NAL Call No.: DISS 72-33,852).

0183

**Influence of herbicides on yield and botanical composition of alfalfa hay (*Medicago sativa*).**  
Dutt, T.E.AGJDA. Harvey, R.G.; Fawcett, R.S. Madison : American Society of Agronomy. Agronomy journal. Mar/Apr 1983. v. 75 (2). p. 229-233. Includes references. (NAL Call No.: 4 AM34P).

0184

**Influence of nitrogen and potassium fertilization and temperature on growth and chemical composition of switchgrass (*Panicum virgatum* L.) and timothy (*Phleum pratense* L.) / by John Allan Balasko.**  
Balasko, John Allan, 1941. 1971. Thesis (Ph.D.)--University of Wisconsin, 1971. Photocopy. Ann Arbor, Mich. : University Microfilms, 1971. iv, 90 leaves ; 21 cm. Bibliography: leaves 84-90. (NAL Call No.: DISS 71-5,625).

0185

**Reduction in photosynthetic and transpiration rates of alfalfa caused by potato leafhopper (*Homoptera: Cicadellidae*) infestations (*Empoasca fabae*, *Medicago sativa*).**  
Womack, C.L. College Park, Md. : Entomological Society of America. Journal of economic entomology. Apr 1984. v. 77 (2). p. 508-513. Includes references. (NAL Call No.: 421 J822).

0186

**Resistance to alfalfa weevil (*Hypera postica*) and potato leafhopper increased by glandular and simple hairs.**

Horber, E.K. Sorensen, E.L.; Johnson, K.J.R. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC - United States Dept. of Agriculture, Science and Education Administration. Agricultural Research. North Central Region. May 1981. May 1981. (19). p. 51. (NAL Call No.: aS21.A75U69).

0187

**Saponin content and its relationship to variety, temperature and field resistance to *Fusarium* and *Verticillium* fungi in alfalfa.**  
Buglos, J. Bocsa, I.; Manninger, K.; Manninger, S. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC - United States Dept. of Agriculture, Science and Education Administration. Agricultural Research. North Central Region. May 1981. May 1981. (19). p. 80-81. (NAL Call No.: aS21.A75U69).

0188

Seasonal trends of nonstructural root carbohydrates, physiological development, and control by herbicides in *Medicago sativa*, of *Barbarea vulgaris*, *Lychnis alba* and *Berteroa incana* / by Robert Edwin Hastings.

Hastings, Robert Edwin, 1938. 1969. Thesis (Ph.D.)--University of Wisconsin, 1969. Photocopy. Ann Arbor, Mich. : University Microfilms, 1970. vii, 93 leaves : ill. ; 21 cm. Bibliography: leaves 88-93. (NAL Call No.: DISS 69-16,958).

0189

Variation in coumestrol content of alfalfa as related to location, variety, cutting, year, stage of growth, and disease (by C.H. Hanson ... et al).

Hanson, C. H. Washington, D.C. Agricultural Research Service, U.S. Dept. of Agriculture 1965. ii, 72 p. : ill. -. Bibliography: p. 43-45. (NAL Call No.: Fiche S-69 no.1333).

0190

Volatile components of alfalfa: possible insect host plant attractants (Tested with the alfalfa seed chalcid *Bruchophagus rodii*).

Buttery, R.G. AR-WRRC~AR-W. Kamm, J.A. Washington, D.C., American Chemical Society. Journal of agricultural and food chemistry. Sept/Oct 1980. v. 28 (5). p 978-981. ill. 7 ref. (NAL Call No.: 381 J8223).

0191

Volatile components of red clover leaves, flowers, and seed pods: possible insect attractants.

Buttery, R.G. Kamm, J.A.; Ling, L.C. Washington, D.C. : American Chemical Society. Journal of agricultural and food chemistry. Mar/Apr 1984. v. 32 (2). p. 254-256. Includes references. (NAL Call No.: 381 J8223).



0192

*Phytophthora clandestina* sp. nov. in roots of  
subterranean clover.

MYXNAE. Taylor, P.A. Pascoe, I.G.; Greenhalgh,  
F.C. Ithaca, N.Y. : Mycotaxon, Ltd. Mycotaxon.  
Jan/Mar 1985. v. 22 (1). p. 77-85. ill.

Includes 21 references. (NAL Call No.: DNAL  
QK603.2.M9).

# PROTECTION OF PLANTS

0193

**Alfalfa : a guide to production and integrated pest management in the Midwest / by C.R. Edwards ... (et al.).**  
Edwards, C. R. (S.I. s.n.) (1981?). 1 v. (loose-leaf) : ill. (some col.) ; 28 cm. -  
Bibliography: p. 223-224. (NAL Call No.: S544.N6 no.113).

0194

**Alfalfa for the Southern Region--problems and promises: Alfalfa breeding problems and solutions for Alabama.**  
Haaland, R.L. Hoveland, C.S. New Orleans, Agricultural Research (Southern Region), Science and Education Administration, U.S. Dept. of Agriculture. Proceedings.Southern Pasture and Forage Crop Improvement Conference. 1979. 1979. (36th). p. 93-94. ill. (NAL Call No.: 60.19 S083).

0195

**Alfalfa for the Southern Region--problems and promises: Alfalfa problems and potential solutions for Georgia.**  
Bouton, J.H. New Orleans, Agricultural Research (Southern Region), Science and Education Administration, U.S. Dept. of Agriculture. Proceedings.Southern Pasture and Forage Crop Improvement Conference. 1979. 1979. (36th). p. 95-97. 9 ref. (NAL Call No.: 60.19 S083).

0196

**Alfalfa for the Southern Region--problems and promises: Panel discussion: An industry viewpoint.**  
Moutray, J.B. New Orleans, Agricultural Research (Southern Region), Science and Education Administration, U.S. Dept. of Agriculture. Proceedings.Southern Pasture and Forage Crop Improvement Conference. 1979. 1979. (36th). p. 98-99. (NAL Call No.: 60.19 S083).

0197

**Alfalfa production (Includes diseases and insect pests).**  
Reinhardt, L.R. Brooks, H.L. Manhattan, Kan., The Service. C.Kansas State University. Cooperative Extension Service. Oct 1978. Oct 1978. (478). 27 p. ill. (NAL Call No.: 275.29 K13EX).

0198

**Alfalfa root development and shoot regrowth in compact soil of wheel traffic patterns.**  
Grimes, D.W. Sheesley, W.R. Madison. Agronomy journalAmerican Society of Agronomy. Nov/Dec 1978. v. 70 (6). p. 955-958. ill. 11 ref. (NAL Call No.: 4 AM34P).

0199

**Alfalfa winter injury, survival, and vigor determined from aerial photographs (Remote sensing, soil drainage).**  
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0213

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## (PROTECTION OF PLANTS)

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**Status of coumestrol and 4'-7-dihydroxyflavone in alfalfa foliage exposed to ozone (Air pollution, adverse effects).**

Hurwitz, B. Pell, E.J. St. Paul, Minn., American Phytopathological Society. Phytopathology. Aug 1979. Aug 1979. . 69 (8). p. 810-813. ill. 22 ref. (NAL Call No.: 464.8 P56).

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0235

**Utilization of deproteinized juice extracted from alfalfa herbage (as a fertilizer on alfalfa, Bromus inermis, plant damage and yield reductions).**

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**Integrated protection of lucerne crops in the USA (review of literature). RUSSIAN.**

Rukavishnikov, B.I. Moskva, Ministerstvo sel'skogo khoziaistva SSSR. Zashchita rastenii. Dec 1977. Dec 1977. (12). p. 47-49. (NAL Call No.: 421 Z1).



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Howell, Don R. Heathman, E. S. Tucson University of Arizona, Cooperative Extension Service 1979. Caption title ~Pesticide Applicator Training collection ~"Q367.". 3 p. : ill. ; 28 cm. (NAL Call No.: SB608.A5H68).

0238

**Baiting regimes for reducing ground squirrel damage to alfalfa.**  
Kalinowski, S.A. deCalesta, D.S. Washington, D.C., The Society. Wildlife Society bulletin. Winter 1981. v. 9 (4). p. 268-272. 8 ref. (NAL Call No.: SK357.A1W5).

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**Diseases, insects, and other pests of rangeland alfalfa.**  
Townsend, C.E. Washington, D.C., The Department. Agriculture information bulletin - U.S. Dept. of Agriculture. June 1982. June 1982. (444). p. 13-14. 18 ref. (NAL Call No.: 1 AG84AB).

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**Integrated pest management : decision guide.**  
DeWitt, Jerry. Taylor, S. Elwynn.; Herman, J. Clayton. 1981. This publication is a guide to identify insects and diseases that affect corn, alfalfa, and soybeans. Weed identification is also included. Document available from: Iowa State Univ., Publications Distribution, Printing & Publications Bldg., Ames, Iowa 50011. 147 p. : ill. (NAL Call No.: Not available at NAL.)(NAL Call No.: IPM-22).

0241

**Invertebrate organisms associated with alfalfa seedling loss in complete-tillage and no-tillage plantings (Slugs, Agriolimax reticulatus, Nemobius spp. crickets).**  
Grant, J.F.JEENA. Yeargan, K.V.; Pass, B.C.; Parr, J.C. College Park : Entomological Society of America. Journal of economic entomology. Oct 1982. v. 75 (5). p. 822-826. Includes references. (NAL Call No.: 421 J822).

0242

**Performance of alfalfa varieties during 1984.**  
OASPA. Burnett, C. Simko, B.; Shock, C. Corvallis, Or. : The Station. Special report - Oregon State University, Agricultural Experiment Station. Aug 1985. (748). p. 15-16. (NAL Call No.: DNAL 100 OR3M).

# PESTS OF PLANTS - INSECTS

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**Absolute-density estimation from sweep sampling, with a comparison of absolute-density sampling techniques for adult potato leafhopper in alfalfa (*Empoasca fabae*, Virginia).**  
Fleischer, S.U. Allen, W.A.; Luna, J.M.; Pienkowski, R.L. College Park, Md., Entomological Society of America. Journal of economic entomology. June 1982. v. 75 (3). p. 425-430. ill. Includes 12 ref. (NAL Call No.: 421 J822).

0244

**Abundance and control of lepidopterous larvae in alfalfa in Georgia (*Spodoptera* species, *Heliothis zea*, *Anticarsia gemmatilis*, *Plathypena scabra*).**  
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0245

**Abundance and diversity of adult Carabidae in insecticide-treated and untreated alfalfa fields (Biological control, predator of plant-feeding insects).**  
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0246

**Adult *Sitona hispidulus* feeding preferences among ninety-six genotypes of ladino white clover (*Trifolium repens*).**  
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0247

**Aggregation patterns of meadow spittlebugs, *Philaenus spumarius* L. (Homoptera: Cercopidae), on old-field alfalfa plants.**  
Mangan, R.L.EVETB. Wutz, A. College Park : Entomological Society of America. Environmental entomology. Feb 1983. v. 12 (1). p. 151-157. Includes references. (NAL Call No.: QL461.E532).

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**Alfalfa analyst.**  
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Document available from: Ext. Office of Information, Ohio State Univ., 2120 Fyffe Road, Columbus, OH 43210. 10 p. : ill. (NAL Call No.: Not available at NAL.). (NAL Call No.: Bulletin 547).

0249

**Alfalfa attacked by the clover-root curculio by F.M. Webster. -.**  
Webster, F. M. 1849-1916. Washington, D.C. : U.S. Dept. of Agriculture, 1915. 8 p. : ill. - (NAL Call No.: DNAL Fiche S-70 no.649).

0250

**Alfalfa blotch leafminer / Ohio State University, Cooperative Extension Service, Columbus, Ohio.**  
1980. This publication discusses the alfalfa blotch leafminer's introduction to Ohio, appearance, life cycle, damage, scouting methods and control. Document available from: Ext. Office of Information, Ohio State University, 2120 Fyffe Roads, Columbus, OH 43210. 1 sheet. (NAL Call No.: Not available at NAL.). (NAL Call No.: Field Ent Series 16).

0251

**The alfalfa caterpillar V.L. Wildermuth. -.**  
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0252

**Alfalfa crop responses to feeding by the meadow spittlebug (Homoptera: Cercopidae) (*Philaenus spumarius*, USA).**  
Parman, V.R. Wilson, M.C. College Park, Md., Entomological Society of America. Journal of economic entomology. June 1982. v. 75 (3). p. 481-486. Includes 10 ref. (NAL Call No.: 421 J822).

0253

**Alfalfa damage from *Acyrtosiphon kondoi* and economic threshold studies in southern California.**  
Stern, V.M. Sharma, R.; Summers, C. College Park, Md., Entomological Society of America. Journal of economic entomology. Feb 15, 1980. v. 73 (1). p. 145-148. ill. 8 ref. (NAL Call No.: 421 J822).

## (PESTS OF PLANTS - INSECTS)

0254

### **Alfalfa forage insect control.**

Coppock, S. Stillwater, Okla. : The Service. OSU extension facts - Cooperative Extension Service, Oklahoma State University. July 1984. (7150). 4 p. (NAL Call No.: DNAL S544.3.0505).

0255

### **Alfalfa forage insect control.**

Coppock, S. Stillwater. O.S.U. extension facts. Science serving agriculture Oklahoma State University. Cooperative Extension Service. May 1979. May 1979. (7150). 3 p. (NAL Call No.: S544.3.0505).

0256

### **Alfalfa insect control / Cooperative Extension Service, College of Agriculture, The University of Arizona.**

Tucson, Arizona The Service 1982?. Pesticide Applicator Training Collection ~Cover title ~"T81102/5c.". 10 p. ; 28 cm. (NAL Call No.: SB608.A5A4).

0257

### **Alfalfa insect control, Iowa 1981 (*Hypera postica*, *Acrythosiphon pisum*).**

Buntin, G.D. Higgins, R. College Park : Entomological Society of America. Insecticide and acaricide tests. 1982. v. 7. p. 131-132. (NAL Call No.: SB950.A1I49).

0258

### **Alfalfa insect control, 1981.**

Quisenberry, S.S. Foster, D.E. College Park : Entomological Society of America. Insecticide and acaricide tests. 1982. v. 7. p. 142-143. (NAL Call No.: SB950.A1I49).

0259

### **Alfalfa insect management studies, 1971-77 (Control, insecticides).**

Manglitz, G.R. NE-AR-NC. Kehr, W.R.; Keith, D.L.; Mueke, J.M.; Campbell, J.B.; Ogden R.L.; Miller, T.P. Lincoln, Neb., The Station. Research bulletin - Nebraska Agricultural Experiment Station. Aug 1980. Aug 1980. (293). 36 p. Bibliography p. 35-36. (NAL Call No.: 100 N27 (3)).

0260

### **Alfalfa insecticides evaluation, 1981 (*Hypera postica*, *Lygus lineolaris*).**

Karner, M.A. Kehr, W.R. College Park : Entomological Society of America. Insecticide and acaricide tests. 1982. v. 7. p. 38-39. (NAL Call No.: SB950.A1I49).

0261

### **Alfalfa insects in central Washington.**

Mayer, D. Johansen, C.; Ford, W.P.; Burns, J.W. Pullman, Wash. : The Service. Extension Bulletin - Washington State University, Cooperative Extension Service. Oct 1983. Oct 1983. (1220). 8 p. ill. (NAL Call No.: 275.29 W27P).

0262

### **Alfalfa integrated pest management (IPM).**

Kapusta, G. Carbondale, Ill., Southern Illinois University. AG review Southern Illinois University. School of Agriculture. 1981. 1981. p. PLSS26. (NAL Call No.: S537.S5S6).

0263

### **Alfalfa looper.**

Jensen, G. Bozeman, Mont. : The Service. Montguide MT : Agriculture - Montana State University, Cooperative Extension Service. May 1983. (8334). 2 p. ill. (NAL Call No.: DNAL S544.3.M9M65).

0264

### **Alfalfa plant resistance to insects (*Hypera postica*, *Heliothis zea*, *Spodoptera frugiperda*, *Mocis latipes*, *Anticarsia gemmatilis*) in Florida.**

Kleyla, P.C. Minnick, D.R. n.p., The Society. Proceedings. Soil and Crop Science Society of Florida. 1979. v. 38. p. 16-17. ill. 6 ref. (NAL Call No.: 56.9 S032).

0265

### **Alfalfa seed chalcid (Hymenoptera: Eurytomidae) infestation trials in annual Medicago.**

JKESA. Brewer, G.J. Sorensen, E.L.; Horber, E.K. Lawrence, Kan. : The Society. Journal of the Kansas Entomological Society. Apr 1985. v. 58 (2). p. 369-371. Includes references. (NAL Call No.: DNAL 420 K13).



0266

**Alfalfa seed insect pest management. -.**

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**Alfalfa seed pesticide research.**

OASPA. Simko, B. Carlson, W. Corvallis, Or. : The Station. Special report - Oregon State University, Agricultural Experiment Station. Aug 1985. (748). p. 9-14. (NAL Call No.: ONAL 100 OR3M).

0268

**Alfalfa: status and current limits to biological control in the eastern U.S.**

Yeargan, K.V. Orlando, Fla. : Academic Press, 1985. Biological control in agricultural IPM systems / edited by Marjorie A. Hoy, Donald C. Herzog. Paper presented at the "Symposium on Biological Control in Agricultural Integrated Pest Management Systems" June 4-6, 1984, held at the Citrus Research and Education Center, University of Florida, at. p. 521-536. Includes references. (NAL Call No.: ONAL SB933.3.B548).

0269

**Alfalfa varieties for Oklahoma, 1983 (Pest resistant varieties).**

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0270

**Alfalfa webworm (*Loxostege commixtalis*): foliage consumption and host preference.**

Capinera, J.L. Renaud, A.R.; Naranjo, S.E. College Station, Tex., Southwestern Entomological Society. The Southwestern entomologist. Mar 1981. v. 6 (1). p. 18-22. ill. 10 ref. (NAL Call No.: QL461.S65).

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**Alfalfa webworm (*Loxostege commixtalis*): larval development in response to diet and temperature.**

Capinera, J.L. Naranjo, S.E.; Renaud, A.R. College Station, Tex., Southwestern Entomological Society. The Southwestern entomologist. Mar 1981. v. 6 (1). p. 10-17. ill. 11 ref. (NAL Call No.: QL461.S65).

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**The alfalfa weevil.**

Lofgren, J. A. Document available from: University of Minnesota, Bulletin Room, 1420 Eckles Avenue, St. Paul, Minnesota 55108 1981. Examines habits and control for alfalfa weevil. 1 sheet : ill. (NAL Call No.: Document available from source.). (NAL Call No.: No.42).

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**The alfalfa weevil.**

Edwards, Richard C. Matthew, David L. & Field crops insects. Document available from: Purdue University, Publication Mailing Room, 301 South Second Street, Lafayette, Indiana 47905 1980. Examines alfalfa weevil habits, damage, management practices and control. 1 sheet : ill. (NAL Call No.: Document available from source.). (NAL Call No.: E-38).

0274

**Alfalfa weevil / Ohio State University, Cooperative Extension Service.**

1981. This discusses the alfalfa weevil and it's distribution, appearance, life cycle, damage, scouting methods, and several types of control, also tables on insecticides. Document available from: Ext. Office of Information, Ohio State University, 2120 Fyffe Road, Columbus, OH 43210. 4 p. : ill. (NAL Call No.: Not available at NAL.). (NAL Call No.: Field Ent Series 17).

0275

**Alfalfa weevil and clover leaf weevil**

(Distinguishing marks, crop damage, control). Johansen, C. Retan, A.H. Pullman, Wash., The Service. Extension Bulletin - Washington State University, Cooperative Extension Service. Mar 1982. Revised from and replaces EM2934. Mar 1982. (0989). 2 p. ill. 1 ref. (NAL Call No.: 275.29 W27P).

0276

**The Alfalfa weevil and methods of controlling it by Geo. I. Reeves ... et al. . -.**

Reeves, George I. Washington, D.C. : U.S. Dept. of Agriculture, 1916. 16 p. : ill., map -. Includes bibliographical references. (NAL Call No.: DNAL Fiche S-70 no.741).

0277

**Alfalfa weevil control, 1981 (*Hypera postica*).**

Klostermeyer, L.E. Evans, R. College Park : Entomological Society of America. Insecticide and acaricide tests. 1982. v. 7. p. 139-140. (NAL Call No.: SB950.A1I49).



## (PESTS OF PLANTS - INSECTS)

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**The alfalfa weevil (*Hypera postica*).**  
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0406

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0411

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0412

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0413

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0417

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0418

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0420

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0421

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0467

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0489

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0490

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0491

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0496

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0497

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0498

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0499

Plant bug (Heteroptera: Miridae) damage to first-crop alfalfa in South Dakota (*Lygus lineolaris*, *Lygus elisus*, *Adelphocoris lineolatus*).  
Walstrom, R.U. JEENAI. College Park : Entomological Society of America. Journal of economic entomology. Dec 1983. v. 76 (6). p. 1309-1311. Includes references. (NAL Call No.: 421 J822).

0500

Plaque assay of alfalfa looper (*Autographa californica*) nuclear polyhedrosis virus on the TN-368 cell line (*Trichoplusia ni*).  
Hink, W.F. Strauss, E.M. Gaithersburg, Md., The Association. Tissue Culture Association manual. Tissue Culture Association. 1979. v. 5 (1). p. 1033-1035. 10 ref. (NAL Call No.: QH573.T52).



0501

Population assessment during the adult stage of the alfalfa blotch leafminer, *Agromyza frontella* (Diptera: Agromyzidae) (Eastern Ontario).

Harcourt, D.G. East Lansing, Michigan Entomological Society. The Great Lakes entomologist. Spring 1982. v. 15 (1). p. 49-54. ill. Includes 7 ref. (NAL Call No.: QL461.M5).

0502

Population dynamics of larvae of the alfalfa leafcutting bee, *Megachile rotundata*, in Eastern Washington / by Jack Darrell Eves.

Eves, Jack Darrell. Ann Arbor, Mich. University Microfilms 1973. Thesis--Washington State University, 1973. viii, 58 leaves. Bibliography: leaves 29-30. (NAL Call No.: DISS 73-14,748).

0503

Population dynamics of the alfalfa blotch leafminer, *Agromyza frontella*, and its influence on alfalfa yield in Massachusetts.

Andaloro, J.T.EVETB. Peters, T.M.; Alicandro, A.J. College Park : Entomological Society of America. Environmental entomology. Apr 1983. v. 12 (2). p. 510-514. Includes references. (NAL Call No.: QL461.E532).

0504

Population trends of the alfalfa weevil (Coleoptera: Curculionidae) and its associated parasites (*Bathyplectes curculionis*, *Tetrastichus incertus*, *Microctonus*, *Bathyplectes anurus*) in Maryland and New Jersey, 1966-1970.

Schroder, R.F.W. AR-BARC. Metterhouse, W.W. Lawrence, Kan., The Society. Journal of the New York Entomological Society. June 1980. v. 88 (2). p. 151-163. ill. 13 ref. (NAL Call No.: 420 N48J).

0505

Population variability in the reaction of alfalfa to alfalfa bud mite (*Eriophyes medicaginis*).

Ridland, P.M. Halloran, G.M. Madison, Wis., Crop Science Society of America. Crop science. Nov/Dec 1980. v. 20 (6). p. 755-757. ill. 3 ref. (NAL Call No.: 64.8 C883).

0506

Potato leafhopper / Ohio State University, Cooperative Extension Service, Columbus, Ohio.

1981. This publication discusses the potato leafhopper's distribution, appearance, life cycle, damage, scouting methods, and chemical controls. Also included are instructions on making a sweep net. Document available from: Ext. Office of Information, Ohio State University, 2120 Fyffe Road, Columbus, OH 43210. 3 p. : ill. (NAL Call No.: Not available at NAL.).(NAL Call No.: Field Ent Series 18).

0507

Potato leafhopper and alfalfa blotch leafminer control, 1981 (*Empoasca fabae*, *Agromyza frontella*).

Hower, A.A. Jr. College Park : Entomological Society of America. Insecticide and acaricide tests. 1982. v. 7. p. 137-138. (NAL Call No.: SB950.A1149).

0508

Potato leafhopper control on alfalfa.

Edwards, Richard C. Matthew, David L.& Field crops insects. Document available from: Purdue University, Publication Mailing Room, 301 South Second Street, Lafayette, Indiana 47905 1980. Lists the advantages of leafhopper control and spray suggestions. 3 p. : ill. (NAL Call No.: Document available from source.).(NAL Call No.: E-36).

0509

Potato leafhopper (*Empoasca fabae*) resistance in glandular-haired alfalfa species.

Shade, R.E. Doskocil, M.J. Madison, Crop Science Society of America. Crop science. Mar/Apr 1979. v. 19 (2). p. 287-289. ill. 7 ref. (NAL Call No.: 64.8 C883).

0510

Potential insect pest invasion of alfalfa seedings on wildlands in the Great Basin.

Tiernan, C.F. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC.United States. Dept. of Agriculture. Science and Education Administration. Agricultural Research. North Central Region. July 1979. July 1979. (7). p. 12. (NAL Call No.: aS21.A75U69).

0511

Preliminary evidence for a microorganismal cause of cytoplasmic incompatibility in the alfalfa weevil (*Hypera postica*).

Klostermeyer, L.E. Manglitz, G.R. East Lansing. Proceedings Forage Insect Research Conference. 1978. 1978. (19th). p. 7. ill. (NAL Call No.:

423.9 F74).

No.: QL461.G4).

0512

**Present status of blue alfalfa aphid (*Acyrtosiphon kondoi*) and research in the Central States.**

Horber, E. East Lansing. Proceedings Forage Insect Research Conference. 1978. 1978. (19th). p. 8-9. (NAL Call No.: 423.9 F74).

0513

**Prevention and control of alfalfa weevil damage by J.C. Hamlin ... et al. . -.**

Hamlin, J. C. Washington, D.C. : U.S. Dept. of Agriculture, 1943. ii, 13 p. : ill., map -. Includes bibliographical references. (NAL Call No.: DNAL Fiche S-70 no.1930).

0514

**Productivity of the alfalfa weevil parasite *Microctonus aethiops* (Nees) in relation to various environmental, host and parasite factors / by Robert A. Fusco.**

Fusco, Robert A. (Robert Angelo), 1941. 1971. Thesis (Ph.D.)--Pennsylvania State University, 1971. Photocopy of typescript. Ann Arbor: University Microfilms, 1972. iv, 98 leaves ; 21 cm. Bibliography: leaves (93)-98. (NAL Call No.: DISS 72-9,463).

0515

**Protecting legume hays from meadow spittlebug.**

MUCBA. Ruppel, R.F. Parker, K.A. East Lansing, Mich. : The Service. Extension bulletin E - Cooperative Extension Service, Michigan State University. Apr 1985. (1795). 2 p. ill. (NAL Call No.: DNAL 275.29 M58B).

0516

**Rapid, inexpensive technique for extracting Egyptian alfalfa weevil (*Coleoptera:Curculionidae*) adults from sample trash (*Hypera brunneipennis*).**

Summers, C.G. JEENA. Newton, A.S. College Park : Entomological Society of America. Journal of economic entomology. Oct 1983. v. 76 (5). p. 1199-1200. ill. Includes references. (NAL Call No.: 421 J822).

0517

**Recovery of *Bathyplectes curculionis* from alfalfa weevil (*Hypera postica*) larvae in South Carolina (Biological control).**

Hearn, L.C. Skelton, T.E. Athens. Journal Georgia Entomological Society. Apr 1979. v. 14 (2). p. 126-131. ill. 5 ref. (NAL Call

0518

**The red imported fire ant, *Solenopsis invicta* Buren: cultural control and effect on hay meadows (*Cynodon dactylon*, *Paspalum dilatatum*, Louisiana, soil fertility).**

Blust, W.E. Wilson, B.H.; Koonce, K.L.; Nelson, B.D.; Sedberry, J.E. Jr. Baton Rouge, La., The Station. Bulletin - Louisiana Agricultural Experiment Station. June 1982. June 1982. (738). 27 p. ill. 19 ref. (NAL Call No.: 100 L93 (1)).

0519

**Red imported fire ant (*Solenopsis invicta*) predation on the alfalfa weevil (*Hypera postica*) and pea aphid (*Acyrtosiphon pisum*, biological control).**

Morrill, W.L. Baltimore, Entomological Society of America. Journal of economic entomology. Dec 1978. v. 71 (6). p. 867-868. 8 ref. (NAL Call No.: 421 J822).

0520

**Reduction in photosynthetic and transpiration rates of alfalfa caused by potato leafhopper (*Homoptera: Cicadellidae*) infestations (*Empoasca fabae*, *Medicago sativa*).**

Womack, C.L. College Park, Md. : Entomological Society of America. Journal of economic entomology. Apr 1984. v. 77 (2). p. 508-513. Includes references. (NAL Call No.: 421 J822).

0521

**Registration of N.S. 72 P2, N.S. 75 P2, N.S. 78 P2, and N.S. 81 P2PA1SAA1 alfalfa germplasms with multiple pest resistance (Breeding for resistance to insect pests).**

Kehr, W.R. Barnes, D.K.; Frosheiser, F.I.; Manglitz, G.R. Madison, Wis. : Crop Science Society of America. Crop science. Sept/Oct 1984. v. 24 (5). p. 1002-1003. Includes 1 references. (NAL Call No.: 64.8 C883).

0522

**Registration of N.S. 76 P2PA1 and N.S. 86 alfalfa germplasms resistant to potato leafhopper yellowing.**

Kehr, W.R. Manglitz, G.R. Madison, Wis. : Crop Science Society of America. Crop science. Sept/Oct 1984. v. 24 (5). p. 1003-1004. Includes 1 references. (NAL Call No.: 64.8 C883).



## (PESTS OF PLANTS - INSECTS)

0523

**Relationship between absolute density and sticky trap catches of adult potato leafhoppers in alfalfa (*Empoasca fabae*).**

Fleischer, S.J.GENSA. Allen, W.A.; Pienkowski, R.L. Athens : The Society. Journal of the Georgia Entomological Society. Apr 1983. v. 18 (2). p. 213-218. Includes references. (NAL Call No.: QL461.G4).

0524

**Relative toxicity of insecticides to alfalfa weevil larvae (*Hypera postica*).**

Mullins, W.GENSA. Kowalski, E.; Andrew, V. Athens : The Society. Journal of the Georgia Entomological Society. Oct 1982. v. 17 (4). p. 438-441. Includes references. (NAL Call No.: QL461.G4).

0525

**Resistance in alfalfa to a red form of the pea aphid (Homoptera: Aphididae) (*Acyrtosiphon pisum*, *Medicago sativa*).**

Kugler, J.L. Ratcliffe, R.H. College Park, Md. : Entomological Society of America. Journal of economic entomology. Feb 1983. v. 76 (1). p. 74-76. Includes references. (NAL Call No.: 421 J822).

0526

**Resistance in diploid and tetraploid annual *Medicago* species to leaf feeding by adult alfalfa weevils (*Hypera postica* Gyl).**

Johnson, K.J.R. Sorensen, E.L. East Lansing. Proceedings Forage Insect Research Conference. 1978. 19th. p. 5-6. (NAL Call No.: 423.9 F74).

0527

**Resistance in glandular-haired annual *Medicago* species to feeding by adult alfalfa weevils (*Hypera postica*).**

Johnson, K.J.F. AR-NC. Sorensen, E.L.; Horber, E.K. College Park, Md., Entomological Society of America. Environmental entomology. Feb 1980. v. 9 (1). p. 133-136. ill. 12 ref. (NAL Call No.: QL461.E532).

0528

**Resistance of glandular-haired *Medicago* species to oviposition by alfalfa weevils (*Hypera postica*).**

Johnson, K.J.R. AR-NC. Sorensen, E.L.; Horber, E.K. College Park, Md., Entomological Society of America. Environmental entomology. Apr 15, 1980. v. 9 (2). p. 241-244. ill. 7 ref. (NAL Call No.: QL461.E532).

0529

**Resistance to alfalfa weevil (*Hypera postica*) and potato leafhopper increased by glandular and simple hairs.**

Horber, E.K. Sorensen, E.L.; Johnson, K.J.R. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC - United States Dept. of Agriculture, Science and Education Administration. Agricultural Research. North Central Region. May 1981. May 1981. (19). p. 51. (NAL Call No.: aS21.A75U69).

0530

**Resistance to spotted alfalfa aphid (Homoptera: Aphididae) in alfalfa seedlings of two plant introductions (*Therioaphis maculata*).**

Manglitz, G.R. Kehr, W.R. College Park, Md. : Entomological Society of America. Journal of economic entomology. Apr 1984. v. 77 (2). p. 357-359. Includes references. (NAL Call No.: 421 J822).

0531

**Resistance to the spotted alfalfa aphid (Homoptera: Aphididae) in glandular-haired *Medicago* species (*Therioaphis maculata*).**

Ferguson, S.EVETB. Sorensen, E.L.; Horber, E.K. College Park : Entomological Society of America. Environmental entomology. Dec 1982. v. 11 (6). p. 1229-1232. Includes references. (NAL Call No.: QL461.E532).

0532

**Root volatile components of red clover: identification and bioassay with the clover root borer (Coleoptera: Scolytidae).**

EVETEX. Kamm, J.A. Buttery, R.G. College Park, Md. : Entomological Society of America. Environmental entomology. Oct 1984. v. 13 (5). p. 1427-1430. Includes references. (NAL Call No.: DNAL QL461.E532).

0533

**A sampling program developed for potato leafhopper nymphs, *Empoasca fabae* (Homoptera: Cicadellidae), on alfalfa.**

Simonet, D.E. Pienkowski, R.L. Ottawa. Canadian entomologist. Apr 1979. v. 111 (4). p. 481-486. ill. Bibliography p. 485-486. (NAL Call No.: 421 C16).

0534

**Sampling techniques for the soil-borne stages of *Agromyza frontella* (Diptera: Agromyzidae) (Alfalfa blotch leafminer).**

Harcourt, D.G. Binns, M.R. East Lansing, Michigan Entomological Society. The Great Lakes entomologist. Autumn 1980. v. 13 (3). p.



159-164. 7 ref. (NAL Call No.: QL461.M5).

#### 0535

**Screening efficacy of spotted alfalfa aphid biotypes and genic systems for resistance in alfalfa (*Therioaphis maculata*).**  
Nielson, M.W. EVETB. Kuehl, R.O. College Park : Entomological Society of America. Environmental entomology. Oct 1982. v. 11 (5). p. 989-996. Includes references. (NAL Call No.: QL461.E532).

#### 0536

**Screening for three-cornered alfalfa hopper resistance (*Spissistilus festinus*, cultivar resistance).**  
Kadir, M.A. Harville, B.G.; Smith, C.M. Baton Rouge : The Department. Report of projects - Louisiana Agricultural Experiment Station, Department of Agronomy. 1982. 1982. p. 268-269. (NAL Call No.: 100 L936).

#### 0537

**Searching behavior of *Hippodamia convergens* larvae (Coccinellidae: Coleoptera) (before and after feeding on the spotted alfalfa aphid, *Therioaphis maculata*).**  
Hunter, K.W. Jr. Cambridge, Cambridge Entomological Club. Psyche. June/Sept 1978. v. 85 (2/3). p. 249-253. ill. 8 ref. (NAL Call No.: 421 P95).

#### 0538

**Seasonal abundance and activity of *Sitona hispidulus* adults in Kentucky (Alfalfa, red clover).**  
Leibee, G.L. Pass, B.C.; Yeargan, K.V. College Park, Md., Entomological Society of America. Environmental entomology. Feb 1981. v. 10 (1). p. 27-30. 11 ref. (NAL Call No.: QL461.E532).

#### 0539

**Seasonal abundance and parasites of the alfalfa blotch leafminer, *Agromyza frontella*, in central Pennsylvania (Biological control).**  
Plummer, J.A. Byers, R.A. College Park, Md., Entomological Society of America. Environmental entomology. Feb 1981. v. 10 (1). p. 105-110. 16 ref. (NAL Call No.: QL461.E532).

#### 0540

**Seasonal history and habits of the European alfalfa beetle, *Subcoccinella vigintiquatuorpunktata* (L.) (Coleoptera: Coccinellidae) (Ecological aspects, phytophage, Pennsylvania).**  
Wheeler, A.G. Jr. Henry, T.J. Washington, D.C., Coleopterists Society. The Coleopterists bulletin. June 1981. v. 35 (2). p. 197-203. ill. Includes 16 ref. (NAL Call No.: 421 C674).

#### 0541

**Seasonal incidence of the fungus *Entomophthora phytonomi* infecting (the alfalfa weevil) *Hypera postica* larvae in central Missouri.**  
Puttler, B. AR-NC. Hostetter, D.L.; Long, S.H.; Borski, A.A. Jr. New York, Academic Press. Journal of invertebrate pathology. Jan 1980. v. 35 (1). p. 99-100. ill. (NAL Call No.: 421 J826).

#### 0542

**Seasonal occurrence of *Rachiplusia* ou, *Autographa biloba*, and associated entomophages in clover (Lady beetles).**  
Martin, P.B. Lingren, P.D.; Greene, G.L.; Baumhover, A.H. Athens, Ga., The Society. Journal of the Georgia Entomological Society. July 1981. v. 16 (3). p. 288-295. Bibliography p. 294-295. (NAL Call No.: QL461.G4).

#### 0543

**Seasonal population census of the alfalfa weevil (*Hypera postica*), clover root curculio (*Sitona hispidula*), and clover leaf weevil (*Hypera punctata*) (Coleoptera: Curculionidae) in southern Illinois.**  
Roberts, S.J. Armbrust, E.J. East Lansing, Michigan Entomological Society. The Great Lakes entomologist. Winter 1979. v. 12 (4). p. 141-148. ill., map. 13 ref. (NAL Call No.: QL461.M5).

#### 0544

**Second cutting alfalfa insect control study, 1980 (*Acyrtosiphon pisum*, *Empoasca fabae*, *Lygus lineolaris*, *Adelphocoris lineolatus*).**  
Cuperus, G.W. Radcliffe, E.B. College Park : Entomological Society of America. Insecticide and acaricide tests. 1982. v. 7. p. 132-133. (NAL Call No.: SB950.A1I49).

## (PESTS OF PLANTS - INSECTS)

0545

**Selection for yellow clover aphid (*Therioaphis trifolii*) and pea aphid (*Acyrtosiphon pisum*) resistance in red clover (Cultivars and strains).**

Gorz, H.J. Manglitz, G.R. Madison, Crop Science Society of America. Crop science. Mar/Apr 1979. v. 19 (2). p. 257-260. ill. 10 ref. (NAL Call No.: 64.8 C883).

0546

**Selective weed control in spring-planted alfalfa: effect on leafhoppers and planthoppers (Homoptera:Auchenorrhyncha), with emphasis on potato leafhopper (*Empoasca fabae*).**

Lamp, W.D. Barney, R.U.; Armbrust, E.U.; Kapusta, G. College Park, Md. : Entomological Society of America. Environmental entomology. Feb 1984. v. 13 (1). p. 207-213. Includes references. (NAL Call No.: QL461.E532).

0547

**Selectivity of insecticides that kill the potato leafhopper (Homoptera: Cicadellidae) and alfalfa weevil (Coleoptera: Curculionidae) and protect the parasite *Microctonus aethiopoides* Loan (Hymenoptera: Braconidae)**

**Carbophenothion .**  
JEENAI. Hower, A.A. Davis, G.A. College Park, Md. : Entomological Society of America. Journal of economic entomology. Dec 1984. v. 77 (6). p. 1601-1607. Includes references. (NAL Call No.: DNAL 421 J822).

0548

**Sex attractant for male alfalfa looper moths, *Autographa californica*.**

Steck, W.F. Underhill, E.W. College Park, Md., Entomological Society of America. Environmental entomology. Apr 1979. v. 8 (2). p. 373-375. ill. 7 ref. (NAL Call No.: QL461.E532).

0549

**Simulating alfalfa weevil effects by defoliation (*Medicago sativa*, *Hypera postica*).**

Fick, G.W. Madison, Wis., American Society of Agronomy. Agronomy journal. Sept/Oct 1982. v. 74 (5). p. 835-840. ill. 19 ref. (NAL Call No.: 4 AM34P).

0550

**Simulation of adult emergence for the alfalfa blotch leafminer (Diptera: Agromyzidae): interaction of environmental temperature and individual developmental rate variation (*Agromyza frontella*).**

Mellors, W.K. EVETB. Helgesen, R.G. College Park : Entomological Society of America.

Environmental entomology. Feb 1983. v. 12 (1). p. 178-185. Includes references. (NAL Call No.: QL461.E532).

0551

**Socio-economic factors relating to the IFA (Imported Fire Ant) and its management (*Solenopsis*, pests of livestock, fruits, vegetables, hay, soybeans, agricultural losses).**

Headley, J.C. Aspelin, A.; Adams, C.T.; Brooks, T.; Brown, R.E. (Washington, D.C.?) : U.S. Dept. of Agriculture, APHIS, 1982. Proceedings of the Symposium on the Imported Fire Ant, June 7-10, 1982, Atlanta American Hotel, Atlanta, Georgia / editor S.L. Battenfield. p. 41-50.5. Includes references. (NAL Call No.: SB945.F535S9 1982).

0552

**Some important chewing insect pests of alfalfa.**  
Hellenenthal, Ronald A. Baker, Norman T. Document available from: University of Minnesota, Bulletin Room, 1420 Eckles Avenue, St. Paul, Minnesota 55108 1971. Lists the chewing insect pests of alfalfa. 1 sheet : ill. (NAL Call No.: Document available from source.). (NAL Call No.: Folder 260).

0553

**Spatial distribution of clover root curculio, *Sitona hispidulus* (Fabricius) (Coleoptera:Curculionidae), eggs in relation to alfalfa crowns.**

JKESA. Elvin, M.K. Yeargan, K.V. Lawrence, Kan. : The Society. Journal of the Kansas Entomological Society. Apr 1985. v. 58 (2). p. 346-348. Includes references. (NAL Call No.: DNAL 420 K13).

0554

**Spore load of *Ascosphaera* species on emerging adults of the alfalfa leafcutting bee, *Megachile rotundata*.**

Vandenberg, J.D. USDA. Fichter, B.L.; Stephen, W.P. Washington, D.C., American Society for Microbiology. Applied and environmental microbiology. Apr 1980. v. 35 (4). p. 650-655. ill. 8 ref. (NAL Call No.: 448.3 AP5).

0555

**Sporulation and mode of infection of *Entomophthora phytonomi* (fungus), a pathogen of the alfalfa weevil (*Hypera postica*, biological control).**

Watson, P.L. Barney, R.U.; Maddox, J.V.; Armbrust, E.U. College Park, Md., Entomological Society of America. Environmental entomology. June 1981. v. 10 (3). p. 305-306. 3 ref. (NAL



Call No.: QL461.E532).

0556

**Spotted alfalfa aphid (*Therioaphis maculata* (Buckton)) (Homoptera: Aphididae): water stress, amino acid content, and resistance (Alfalfa varieties).**

DeVries, N.E.L. Manglitz, G.R. Lawrence, Kan., The Society. Journal of the Kansas Entomological Society. Jan 1982. v. 55 (1). p. 57-64. Includes 10 ref. (NAL Call No.: 420 K13).

0557

**Spraying for the alfalfa weevil Geo. I. Reeves, T.R. Chamberlin, and K.M. Pack . -.**  
Reeves, George I. Washington, D.C. : U.S. Dept. of Agriculture, 1920. 20 p. : ill. -. (NAL Call No.: DNAL Fiche S-70 no.1185).

0558

**Studies on the control of the clover root borer *Hylastinus obscurus* (Marsham) in Ohio with notes on coincidental control of the meadow spittlebug / by Bernard Auman App.**

App, Bernard Auman, 1906. Ann Arbor, Mich. University Microfilms International 1980. Thesis--Ohio State University, 1953. Facsimile produced by microfilm-xerography. ii, 64 leaves. Bibliography: leaves 61-63. (NAL Call No.: DISS 59-05,346).

0559

**Studies on the use of carbofuran to enhance alfalfa stand establishment (Insect pest control).**

Hogg, D.B.AFGCA. Wedberg, J.L. Lexington : The Council. Proceedings - American Forage and Grassland Council. 1983. Paper presented at the Forage and Grassland Conference on "Use Home Grown Forages for Profit and Conservation", Civic Center, Eau Claire, Wisconsin, Jan 23-26, 1983. 1983. p. 97-101. (NAL Call No.: 60.19 J66).

0560

**A study of *Microctonus aethiops* (Nees), a braconid parasite of the alfalfa weevil, *Hypera postica* (Gyllenhal) / by John William Neal.**

Neal, John William, 1937. 1970. Thesis (Ph.D.)--University of Maryland, 1970. Photocopy. Ann Arbor, Mich. : University Microfilms, 1971. vii, 92 leaves ; 21 cm. Bibliography: leaves 81-87. (NAL Call No.: DISS 71-4,040).

0561

**A study of the arthropod fauna of alfalfa / by Alfred George Wheeler.**

Wheeler, Alfred George, 1944. 1971. Thesis (Ph.D.)--Cornell University, 1971. Photocopy. Ann Arbor, Mich. : University Microfilms, 1972. x, 332 leaves ; 21 cm. Bibliography: leaves 191-213. (NAL Call No.: DISS 71-27,404).

0562

**A study of ultrastructural changes in tolerant and susceptible lines of alfalfa induced by stem nematode (*Ditylenchus dipsaci* Kuhn).**

Chang, Doris C. N., 1942. Ann Arbor, Mich. University Microfilms 1973. Thesis--Utah State University, 1971. ix, 78 leaves. Bibliography: leaves 68-77. (NAL Call No.: DISS 73-876).

0563

**Summer diapause of the clover leaf weevil, *Hypera punctata*, and lesser clover leaf weevil, *Hypera nigrirostris*, in Wisconsin.**

Litsinger, J.A. Apple, J.W. East Lansing, Mich. : Michigan Entomological Society. The Great Lakes entomologist. Summer 1984. v. 17 (2). p. 83-86. Includes references. (NAL Call No.: QL461.M5).

0564

**Survival of *Verticillium albo-atrum* from alfalfa in feces of leaf-chewing insects.**

PHYTAJ. Huang, H.C. Harper, A.M. St. Paul, Minn. : American Phytopathological Society. Phytopathology. Feb 1985. v. 75 (2). p. 206-208. Includes 20 references. (NAL Call No.: DNAL 464.8 P56).

0565

**Susceptibility of the alfalfa weevil to a *Bacillus thuringiensis* exotoxin (*Hypera postica*, biological control).**

Wilson, M.C. Chen, F.C.; Shaw, M.C. Athens, Ga. : The Society. Journal of the Georgia Entomological Society. July 1984. v. 19 (3). p. 366-371. ill. Includes 3 references. (NAL Call No.: QL461.G4).

0566

**Temperature effect on development and morphometrics of the potato leafhopper (*Empoasca fabae*, alfalfa).**

Simonet, D.E. Pienkowski, R.L. College Park, Md., Entomological Society of America. Environmental entomology. Dec 1980. v. 9 (6). p. 798-800. 8 ref. (NAL Call No.: QL461.E532).



## (PESTS OF PLANTS - INSECTS)

0567

Temperature requirements for development of *Autographa californica* (Lepidoptera: Noctuidae) (Alfalfa looper).

Miller, J.C. West, K.J.; Hanson, P.E. College Park, Md. : Entomological Society of America. Environmental entomology. Apr 1984. v. 13 (2). p. 593-594. Includes references. (NAL Call No.: QL461.E532).

0568

Thermal requirements for development of the parasite *Microctonus aethipoides* (on the alfalfa weevil, *Hypera postica*, integrated control).

Morales, J. Hower, A.A. College Park, Md., Entomological Society of America. Environmental entomology. June 1981. v. 10 (3). p. 279-284. Bibliography p. 283-284. (NAL Call No.: QL461.E532).

0569

Three species of the genus *Lygus* and their relation to alfalfa seed production in southern Arizona and California by Loyd L. Stitt.

Stitt, Loyd L. Washington, D.C. U.S. Dept. of Agriculture 1940. 19 p. : ill. -. Bibliography: p. 19. (NAL Call No.: Fiche S-69 no.741).

0570

Timothy hay--Japan market reopens (following export fumigation to prevent introduction of *Mayetiola destructor* from Washington).

Martin, W.W. Washington, D.C., Science and Education Administration, U.S. Dept. of Agriculture. Agricultural research. United States. Dept. of Agriculture. Oct 1979. v. 28 (4). p. 12-13. ill. (NAL Call No.: 1.98 AG84).

0571

Toxicity of nitro compounds from *Lotus pedunculatus* to grass grub (*Costelytra zealandica*) (Coleoptera: Scarabaeidae) (Includes questionable suitability of *Coronilla varia* and *Astragalus* for pasture and hay).

Hutchins, R.F.N. Sutherland, O.R.W.; Gnanasunderam, C.; Greenfield, W.J.; Williams, E.M.; Wright, H.J. New York, N.Y. : Plenum Press. Journal of chemical ecology. Jan 1984. v. 10 (1). p. 81-93. Includes references. (NAL Call No.: QD415.A1J6).

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Trap and synthetic lure for the checkered flower beetle (*Trichodes ornatus*), a serious predator of alfalfa leafcutting bees (*Megachile pacifica*).

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0573

Trichomes and field resistance of *Medicago* species to the alfalfa seed chalcid (Hymenoptera: Eurytomidae) (*Bruchophagus rodii*).

Brewer, G.J. EVETB. Sorensen, E.L.; Horber, E.K. College Park : Entomological Society of America. Environmental entomology. Feb 1983. v. 12 (1). p. 247-251. ill. Includes references. (NAL Call No.: QL461.E532).

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Flint, M.L. Klonsky, K.; Zalom, F.G. Berkeley : The Station. California agriculture - California Agricultural Experiment Station. Jan/Feb 1984. v. 38 (1/2). p. 28-30. maps. (NAL Call No.: 100 C12CAG).

0575

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JEENAI. Buntin, G.D. Pedigo, L.P. College Park, Md. : Entomological Society of America. Journal of economic entomology. Apr 1985. v. 78 (2). p. 482-484. Includes references. (NAL Call No.: DNAL 421 J822).

0576

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Baughner, D.G. Yendol, W.G. College Park, Md., Entomological Society of America. Journal of economic entomology. June 1981. v. 74 (3). p. 309-313. Bibliography p. 313. (NAL Call No.: 421 J822).

0577

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Los, L.M. Allen, W.A. College Park, Md., Entomological Society of America. Journal of

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0578

**Volatile components of alfalfa: possible insect host plant attractants (Tested with the alfalfa seed chalcid *Bruchophagus roddi*).**

Buttery, R.G. AR-WRRC-AR-W. Kamm, J.A. Washington, D.C., American Chemical Society. Journal of agricultural and food chemistry. Sept/Oct 1980. v. 28 (5). p 978-981. ill. 7 ref. (NAL Call No.: 381 J8223).

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**1980 Kansas field crop insect control recommendations.**

Brooks, Leroy. Gates, Dell E. 1980. First this publication discusses some safety tips for using insecticides, then it discusses the control of insects attacking alfalfa, corn, sorghum, wheat, and soybeans. It also includes a list of the Poison Control Information Centers in Kansas. Document available from: Distribution Center, Umberger Hall, Kansas State University, Manhattan, KS 66506. 27 p. (NAL Call No.: C 431).

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**1981 Kansas field crops insect control recommendations.**

Brooks, Leroy. Gates, Dell E. 1981. First this publication discusses some safety tips for using insecticides, then it discusses the control of insects attacking alfalfa, corn, sorghum, wheat, and soybeans. It also includes a list of the Poison Control Information Centers in Kansas. Document available from: Distribution Center, Umberger Hall, Kansas State University, Manhattan, KS 66506. 28 p. (NAL Call No.: C 431).

0581

**Feeding specialization of some nongregarious grasshoppers (Acrididae pests of hay meadows and pastures). RUSSIAN.**

Bugaev, G.S. Alma-Ata. Vestnik sel'skokhoziaistvennoi nauki kazakhstana. Ezhemesiachnyi nauchnyi zhurnal Kazakh S.S.R. Ministerstvo sel'skogo khoziaistva. May 1978. May 1978. (5). p. 43-46. ill. (NAL Call No.: 20 AK16).

0582

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0583

**Effects of Meloidogyne hapla and Meloidogyne incognita on Phytophthora root rot of alfalfa.**

Welty, R.E. Barker, K.R.; Lindsey, D.L. St. Paul, Minn., American Phytopathological Society. Plant disease. Dec 1980. v. 64 (12). p. 1097-1099. 26 ref. (NAL Call No.: 1.9 P69P).

0584

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Bookbinder, M.G. Bloom, J.R.; Lukezic, F.L. Ames, Iowa, Society of Nematologists. Journal of nematology. Jan 1982. v. 14 (1). p. 105-109. Includes 9 ref. (NAL Call No.: QL391.N4J62).

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**Suppression of alfalfa growth by concomitant populations of Pratylenchus penetrans and two Fusarium species.**

Mauza, B.E. Webster, J.M. Ames, Iowa, Society of Nematologists. Journal of nematology. July 1982. v. 14 (3). p. 364-367. 16 ref. (NAL Call No.: QL391.N4J62).



# PLANT DISEASES - GENERAL

0586

## Alfalfa analyst.

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0587

## The causes of yellows in alfalfa (*Medicago sativa* L.) and comparisons of green and yellow plants for their growth, vegetative establishment, mortality and chemical composition / by Om Parkash Vadhw.

Vadhw, Om Parkash, 1941. 1970. Thesis (Ph.D.)--Utah State University, 1970. Photocopy. Ann Arbor, Mich. : University Microfilms, 1972. xix, 133 leaves ; 21 cm. Bibliography: leaves 106-110. (NAL Call No.: DISS 72-4,744).

0588

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Evans-Ruhl, G. PIACA. Latin, R.X.; Pecknold, P.C.; Scott, D.H. Indianapolis : The Academy. Proceedings of the Indiana Academy of Science 1981. v. 91. p. 120-139. Includes references. (NAL Call No.: 500 IN2).

0589

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Townsend, C.E. Washington, D.C., The Department. Agriculture information bulletin - U.S. Dept. of Agriculture. June 1982. June 1982. (444). p. 13-14. 18 ref. (NAL Call No.: 1 AG84AB).

0590

## Diseases of alfalfa in Alabama (caused by pathogenic fungi and nematodes).

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0591

## Diseases of annual clover species.

Pratt, R.G. Madison : The Department. Progress report, clovers and special purpose legumes research - Univ. of Wisconsin, Dept. of Agronomy. 1982. v. 15. p. 59-60. (NAL Call No.: SB193.P72).

0592

## Diseases threatening to Florida-grown alfalfa (*Medicago sativa*, alfalfa mosaic virus, *Colletotrichum trifolii*, *Rhizoctonia solani*, *Uromyces striatus*).

Roberts, D.A. Horner, E.S.; Ruelke, D.C. (S.I.) : The Society. Proceedings - Soil and Crop Science Society of Florida. 1982. v. 41. p. 36-38. ill. Includes references. (NAL Call No.: 56.9 S032).

0593

## Investigations of internal bark necrosis in delicious apple trees / by Timothy Eugene Crocker.

Crocker, Timothy Eugene, 1944. 1970. Thesis (Ph.D.)--Michigan State University, 1970. Photocopy. Ann Arbor, Mich. : University Microfilms, 1971. vi, 71 leaves ; 21 cm. Bibliography: leaves 67-71. (NAL Call No.: DISS 71-2,051).

0594

## Pest management systems for alfalfa diseases (Fungi, bacteria, viruses, nematodes, pollutants, mineral deficiencies, and injuries).

Leath, K.T. Boca Raton, Fla., CRC Press. CRC handbook of pest management in agriculture. 1981. v. 3. p. 293-302. ill. 32 ref. (NAL Call No.: SB950.C7).

0595

## Registration of Daneb I, Daneb I BW1, and Daneb I P2, alfalfa germplasms with multiple pest resistance (*Pseudopeziza medicaginis*, *Pseudopeziza jonesii*, *Cercospora medicaginis*).

Kehr, W.R. Rumbaugh, M.D.; Semeniuk, G.; Barnes, D.K.; Frosheiser, F.I.; Manglitz, G.R.; Boe, A.A. Madison, Wis. : Crop Science Society of America. Crop science. Sept/Oct 1984. v. 24 (5). p. 1001. Includes 1 references. (NAL Call No.: 64.8 C883).

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0596

Registration of W10AnWFuPy3, (B2An4 X Arc)AnWFuPy3, and B28 multiple pest resistant alfalfa germplasms (*Medicago sativa*).  
Elgin, J.H. Jr. Ostazeski, S.A. Madison, Wis. : Crop Science Society of America. Crop science. May/June 1984. v. 24 (3). p. 623. Includes references. (NAL Call No.: 64.8 C883).

0597

A survey of alfalfa diseases in Wyoming.  
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0598

**Additional alternative hosts of Phakopsora pachyrhizi, casual agent of soybean rust (Coronilla varia, Lespedeza striata, Lupinus luteus, Sesbania sericea, Trifolium repens, USA, Asia, Australia).**  
Rytter, J.L. Dowler, W.M.; Bromfield, K.R. St. Paul, Minn. : American Phytopathological Society. Plant disease. Sept 1984. v. 68 (9). p. 818-819. Includes 16 references. (NAL Call No.: 1.9 P69P).

0599

**Alfalfa seedling resistance to Phytophthora megasperma (the causative agent of Phytophthora root rot).**  
Irwin, J.A.G. Miller, S.A. St. Paul, Minn., American Phytopathological Society. Phytopathology. Oct 1979. v. 69 (10). p. 1051-1055. ill. 10 ref. (NAL Call No.: 464.8 P56).

0600

**Alfalfa yields increase with anthracnose resistance.**  
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0601

**Anthracnose as a cause of red clover failure in the southern part of the clover belt by A.J. Pieters and John Monteith, Jr. . -.**  
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0602

**Anthracnose (Colletotricium trifoli): a serious threat to alfalfa.**  
Watkins, J.E. Kehr, W.R.; Partridge, J.E. Lincoln, The Station. Farm, ranch and home quarterly - Nebraska Agricultural Experiment Station. Winter 1981. v. 27 (4). p. 8-9. ill. (NAL Call No.: 100 N27N).

0603

**Anthracnose disease ratings for alfalfa varieties and experimental strains (by T.E. Devine, T.A. Campbell, and C.H. Hanson).**  
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0605

**Anthracnose of alfalfa (caused by the fungus Collitotrichum trifolii).**  
Heimann, M.F. Grau, C.R. Madison, Wis., The Programs. Publication - Cooperative Extension Programs, University of Wisconsin Extension. Jan 1982. Jan 1982. (A3164). 2 p. ill. (NAL Call No.: S544.3.W6W53).

0604

**Anthracnose of alfalfa (Caused by the fungus Collitotrichum trifolii).**  
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0606

**Anthracnose of alfalfa observed in Minnesota (Colletotrichum trifolii).**  
Frosheiser, F.I. Morrison, R.H.; Welty, R.E. St. Paul, Minn., American Phytopathological Society. Plant disease. Oct 1981. v. 65 (10). p. 844-845. 9 ref. (NAL Call No.: 1.9 P69P).

0607

**Anthracnose resistance increases alfalfa yields (Colletotrichum trifolii).**  
Elgin, J.H. Jr. Barnes, D.K.; Busbice, T.H.; Buss, G.R.; Clark, N.A.; Cleveland, R.W.; Ditterline, R.L.; Evans, D.W.; Fransen, S.C.; Horrocks, R.D. Madison, Wis., Crop Science Society of America. Crop science. May/June 1981. v. 21 (3). p. 457-460. map. 15 ref. (NAL Call No.: 64.8 C883).

0608

**Aphelenchus avenae (a mycophagous nematode) as a potential biological control agent for control of fungi causing root and crown rots of alfalfa.**  
Barnes, G.L. Russell, C.C. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC. United States. Dept. of Agriculture. Science and Education Administration. Agricultural Research. North Central Region. July 1979. July 1979. (7). p. 31. (NAL Call No.: aS21.A75U69).

0609

**Aphelenchus avenae (mycophagous nematode), a potential biological control agent for root rot fungi (Rhizoctonia solani, Fusarium solani, alfalfa).**  
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### 0610

**Beta-glucosidases potentially involved in cyanogenesis during infection of white clover by *Stemphylium sarciniforme*.**

Wilkinson, H.T. Millar, R.L. Ottawa. Canadian journal of botany. Jan 1, 1979. v. 57 (1). p. 69-73. ill. 14 ref. (NAL Call No.: 470 C16C).

### 0611

**Biotypes of *Stemphylium botryosum* on alfalfa in North America.**

Cowling, W.A. Gilchrist, D.G.; Graham, J.H. St. Paul, Minn., American Phytopathological Society. Phytopathology. July 1981. v. 71 (7). p. 679-684. ill. 30 ref. (NAL Call No.: 464.8 P56).

### 0612

**Blue lupine as a host for *Collectotrichum trifolii* from alfalfa for *Collectotrichum fragariae* from strawberry (*Lupinus angustifolius*, *Medicago sativa*, *Fragaria X ananassa*).**

Welty, R.E. St. Paul, American Phytopathological Society. Plant disease. Feb 1984. v. 68 (2). p. 142-144. ill. Includes references. (NAL Call No.: 1.9 P69P).

### 0613

**Breeding for disease resistance in red clover (*Trifolium pratense*, fungal disease).**

Smith, R.R. Boulder, Colo. : Westview Press, 1983. Proceedings of the XVI International Grassland Congress : held at Lexington, Kentucky, U.S.A. June 15-24, 1981 / edited by J. Allan Smith and Virgil W. Hays. p. 110-113. ill. 2 p. ref. (NAL Call No.: SB197.I5 1981a).

### 0614

**Captan: a promising fungicide for management of chalkbrood disease in the alfalfa leafcutting bee.**

JEENAI. Youssef, N.N. McManus, W.R. College Park, Md. : Entomological Society of America. Journal of economic entomology. Apr 1985. v. 78 (2). p. 428-431. Includes 10 references. (NAL Call No.: DNAL 421 J822).

### 0615

**Characteristics of geographical isolates of the alfalfa strain of *Verticillium albo-atrum*.**

Christen, A.A. Peadar, R.N. St. Paul, Minn., American Phytopathological Society. Phytopathology. Aug 1979. Aug 1979. . 69 (8). p. 914. (NAL Call No.: 464.8 P56).

### 0616

**Chemical control of spring black stem of alfalfa, 1980 (*Alfalfa* (*Medicago sativa* 'Cody'), spring black stem; *Phoma medicaginis*).**

Lengkeek, V.H. (s.l.), The Society. Fungicide and nematicide tests; results - American Phytopathological Society. 1981. v. 36. p. 83. (NAL Call No.: 464.9 AM31R).

### 0617

**Clover anthracnose caused by *collectotrichum trifolii* by John Montieith, Jr.**

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### 0618

**Clover rot.**

BOREA. Scott, S.W. Bronx, N.Y. : New York Botanical Garden. The Botanical review. Literature review. Oct/Dec 1984. v. 50 (4). p. 491-504. Includes references. (NAL Call No.: DNAL 450 B6527).

### 0619

**Common alfalfa leafspot / Purdue University.**

Document available from: Purdue University, Publication Mailing Room, 301 South Second Street, Lafayette, Indiana 47905 1958. Gives general information about alfalfa leaf spots. 1 sheet : ill. (NAL Call No.: Document available from source.). (NAL Call No.: Mimeo BP 6-5).

### 0620

**Comparative abilities of *Stemphylium botryosum* and other fungi to induce and degrade a phytoalexin from alfalfa.**

Higgins, Verna Jessie. Ann Arbor, Mich. University Microfilms 1971. Thesis--Cornell University, 1969. viii, 130 leaves. Includes bibliographies. (NAL Call No.: DISS 70-5,799).

0621

**Comparative development of *Fusarium roseum* isolates in roots of red clover.**

Stutz, J.C. Leath, K.T. St. Paul, Minn., American Phytopathological Society. Phytopathology. Feb 1981. Abstract only. v. 71 (2). p. 258. (NAL Call No.: 464.8 P56).

0622

**Comparative responses of selected cultivars of four annual clover species to *Sclerotinia trifoliorum* at different inoculum levels in the field (*Trifolium alexandrinum*, *Trifolium incarnatum*, *Trifolium subterraneum*, *Trifolium vesiculosum*, forage legumes, crown and stem rot, yields, Mississippi).**

Pratt, R.G. Knight, W.E. St. Paul, American Phytopathological Society. Plant disease. Feb 1984. v. 68 (2). p. 131-134. Includes references. (NAL Call No.: 1.9 P69P).

0623

**Conquering *Phytophthora* (megasperma) root rot with resistant alfalfa cultivars.**

Frosheiser, F.I. AR-NC. St. Paul, Minn., American Phytopathological Society. Plant disease. Oct 1980. v. 64 (10). p. 909-912. ill. 11 ref. (NAL Call No.: 1.9 P69P).

0624

**Contamination of insects by the plant pathogen *Verticillium albo-atrum* in an alfalfa field (*Medicago sativa*).**

Harper, A.M. Huang, H.C. College Park, Md. : Entomological Society of America. Environmental entomology. Feb 1984. v. 13 (1). p. 117-120. ill. Includes references. (NAL Call No.: QL461.E532).

0625

**Contributions of resistance to anthracnose, bacterial wilt and *Phytophthora* root rot to persistence and yield of alfalfa under irrigation.**

Buss, G.R. AR. Beltsville, Md., The Region. ARS-NE - United States Agricultural Research Service, Northeastern Region. Feb 1978. Feb 1978. (90). p. 37. (NAL Call No.: aS21.A75U45).

0626

**Control of damping off of alfalfa with seed treatments, 1978 (*Alfalfa* (*Medicago sativa* 'Hunter River'), seedling damping-off; *Pythium ultimum*, *Pythium irregulare*).**

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AM31R).

0627

**Control of downy mildew and *Phytophthora* root rot of alfalfa seedlings with seed treatment, 1978 (*Alfalfa* (*Medicago sativa* 'Answer'), downy mildew; *Peronospora trifoliorum*, *Phytophthora* root rot; *Phytophthora megasperma* f. sp. *medicaginis*).**

Stuteville, D.L. Skinner, D.Z. (s.l.). The Society. Fungicide and nematicide tests; results - American Phytopathological Society. 1980. v. 35. p. 171-172. (NAL Call No.: 464.9 AM31R).

0628

**Control of *Rhizoctonia* web blight in low-tannin *sericea* seed production (Fungi, hay diseases).**

Clark, E.M. Donnelly, E.D. Auburn, Ala., The Station. Highlights of agricultural research - Alabama, Agricultural Experiment Station. Summer 1982. v. 29 (2). p. 17. ill. (NAL Call No.: 100 AL1H).

0629

**Correlation between root and stem reactions of alfalfa to *Phytophthora megasperma* f. sp. *medicaginis*.**

Irwin, J.A.G. AR-NC~AR. Maxwell, D.P.; Smith, R.R. St. Paul, Minn., American Phytopathological Society. Phytopathology. Oct 1980. v. 70 (10). p. 987-990. 17 ref. (NAL Call No.: 464.8 P56).

0630

**Correlation of medicarpin production with resistance to *Phytophthora megasperma* f. sp. *medicaginis* in alfalfa seedlings (Root rot, *Medicago sativa*).**

Vaziri, A. Keen, N.T.; Erwin, D.C. St. Paul, Minn., American Phytopathological Society. Phytopathology. Dec 1981. v. 71 (12). p. 1235-1238. Includes 20 ref. (NAL Call No.: 464.8 P56).

0631

**Crown rot of alfalfa in Utah (*Fusarium* spp., *Serratia marcescens*, *Pseudomonas marginalis* var. *alfalfae*, *Medicago sativa*).**

Turner, V.PHYTA. Van Alfen, N.K. St. Paul : American Phytopathological Society. Phytopathology. Sept 1983. v. 73 (9). p. 1333-1337. ill. Includes references. (NAL Call No.: 464.8 P56).



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0632

**Crownwart of alfalfa in Pennsylvania (caused by the chytrid fungus, *Physoderma alfalfae*).**  
Leath, K.T. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC. United States. Dept. of Agriculture. Science and Education Administration. Agricultural Research. North Central Region. July 1979. July 1979. (7). p. 45-46. (NAL Call No.: aS21.A75U69).

0633

**Cultural characteristics and host range of *Codinaea fertilis* (Root rot of ladino clover (*Trifolium repens*)).**  
Campbell, C.L. St. Paul, Minn., American Phytopathological Society. Phytopathology. May 1982. v. 72 (5). p. 501-504. ill. Includes 7 ref. (NAL Call No.: 464.8 P56).

0634

**Cylindrocladium root and crown rot of alfalfa in Hawaii (*Medicago sativa*).**  
Ooka, J.J. Uchida, J.Y. St. Paul, Minn., American Phytopathological Society. Plant disease. Oct 1982. v. 66 (10). p. 947-948. 17 ref. (NAL Call No.: 1.9 P69P).

0635

**Decline of established alfalfa in soils naturally infested with *Phytophthora megasperma* f. sp. *medicaginis* and level of correlation by seedling assay.**  
PLDRA. Havey, M.J. Grau, C.R. St. Paul, Minn. : American Phytopathological Society. Plant disease. Mar 1985. v. 69 (3). p. 221-224. Includes 22 references. (NAL Call No.: DNAL 1.9 P69P).

0636

**Demonstration of *Verticillium albo-atrum* within alfalfa seed (*Medicago sativa*, wilt).**  
Christen, A.A. St. Paul, Minn., American Phytopathological Society. Phytopathology. Apr 1982. v. 72 (4). p. 412-414. ill. Includes 11 ref. (NAL Call No.: 464.8 P56).

0637

**Development of cultural management practices to control verticillium wilt of alfalfa, caused by *Verticillium albo-atrum* (Vaa) / D.C. Arny ... (et al.).**  
Arny, D. C. (Wisconsin? Wisconsin Agricultural Experiment Station?) 1983. Cover title ~"Final report April, 1983. ~At head of title: Specific Cooperative Agreement no. 58-519B-1-978 between the Wisconsin Agricultural Experiment Station and ARS, USDA (Period of agreement - June 11,

1981 to May 31, 1982). 6 leaves : ill. ; 28 cm. (NAL Call No.: SB608.A5D48).

0638

**Disease interactions of bean yellow mosaic virus and *Phytophthora* species in arrowleaf clover (Abstract only).**  
Pratt, R.G. Knight, W.E.; Barnett, D.W. St. Paul, Minn., American Phytopathological Society. Phytopathology. Aug 1981. v. 71 (8). p. 900. (NAL Call No.: 464.8 P56).

0639

**Diseases of annual clover species (*Sclerotinia trifoliorum*).**  
Pratt, R.G. Madison, Wis., The Department. Progress report, clovers and special purpose legumes research - Univ. of Wisconsin, Dept. of Agronomy. 1981. v. 14. p. 43-44. 1 ref. (NAL Call No.: SB193.P72).

0640

**Diseases of annual clover species (*Sclerotinia trifoliorum*).**  
Pratt, R.G. Knight, W.E. Madison : The Department. Progress report, clovers and special purpose legumes research - Univ. of Wisconsin, Dept. of Agronomy. 1983. v. 16. p. 45-46. Includes references. (NAL Call No.: SB193.P72).

0641

**Ecological factors influencing infection and development of *Colletotrichum trifolii* in alfalfa.**  
Welty, R.E. AR-AR-SO. Beltsville, Md., The Region. ARS-NE - United States Agricultural Research Service, Northeastern Region. Feb 1978. Feb 1978. (90). p. 38. (NAL Call No.: aS21.A75U45).

0642

**Effect of benomyl on *Sclerotinia* crown and stem rot of alfalfa (*Medicago sativa*, *Sclerotinia trifoliorum*, spray schedule).**  
Welty, R.E. Rawlings, J.O. St. Paul, Minn. : American Phytopathological Society. Plant disease. Apr 1984. v. 68 (4). p. 294-296. Includes references. (NAL Call No.: 1.9 P69P).



0643

Effect of CGA-48988 seed treatments on downy mildew control and hay production of alfalfa, 1979 (Alfalfa (*Medicago sativa* 'Kanza'), downy mildew; *Peronospora trifoliorum*, rust; *Uromyces striatus*, summer black stem; *Cercospora medicaginis*).

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Cowling, W.A. Gilchrist, D.G. St. Paul, Minn., American Phytopathological Society. Plant disease. Apr 1982. v. 66 (4). p. 291-294. Includes 24 ref. (NAL Call No.: 1.9 P69P).

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Pandey, Mahesh Chandra, 1942. 1969. Thesis (Ph.D.)--University of Minnesota, 1969. Photocopy. Ann Arbor, Mich. : University Microfilms, 1970. 51 leaves : ill. ; 21 cm. Bibliography: leaves 49-51. (NAL Call No.: DISS 69-20,043).

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0647

Effect of methyl bromide and a systemic fungicide on alfalfa stand establishment and on selected soil microbial populations (Includes *Fusarium* sp. and *Phythium* sp.).

Thyr, B.D. Hartman, B.J. St. Paul, Minn., American Phytopathological Society. Phytopathology. Aug 1979. Aug 1979. . 69 (8). p. 921. (NAL Call No.: 464.8 P56).

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0649

Effect of soil matric potential on *Phytophthora* root rot of alfalfa (*Phytophthora megasperma* f. sp. *medicaginis* on *Medicago sativa*).

Kuan, T.L. Erwin, D.C. St. Paul, Minn., American Phytopathological Society. Phytopathology. May 1982. v. 72 (5). p. 543-548. ill. Includes 31 ref. (NAL Call No.: 464.8 P56).

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Effect of soil water matric potential on resistance to *Fusarium oxysporum* f. sp. *medicaginis* in alfalfa (*Medicago sativa*, wilt).

Emberger, G. PHYTA. Welty, R.E. St. Paul : American Phytopathological Society. Phytopathology. Feb 1983. v. 73 (2). p. 208-212. 18 ref. (NAL Call No.: 464.8 P56).

0651

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Hijano, E.H. St. Paul, Minn., American Phytopathological Society. Plant disease. Sept 1981. v. 65 (9). p. 725-726. 14 ref. (NAL Call No.: 1.9 P69P).

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Hijano, E.H. Frosheiser, F.I. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC - United States Dept. of Agriculture, Science and Education Administration. Agricultural Research. North Central Region. May 1981. May 1981. (19). p. 37. 3 ref. (NAL Call No.: aS21.A75U69).

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Stuteville, D.L. Sorensen, E.L. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC - United States Dept. of Agriculture, Science and Education Administration. Agricultural Research. North Central Region. May 1981. May 1981. (19). p. 36. 3 ref. (NAL Call No.: aS21.A75U69).

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**Effects of inoculum concentration and temperature on anthracnose severity in alfalfa (*Colletotrichum trifolii*).**

Welty, R.E. Rawlings, J.O. (s.l.) : Agricultural Research Service, U.S. Dept. of Agriculture. Report of the ... Alfalfa Improvement Conference. Dec 1983. Includes abstract. Dec 1983. (28th). p. 41. Includes references. (NAL Call No.: 60.9 AL2).

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**Effects of *Meloidogyne hapla* and *Meloidogyne incognita* on *Phytophthora* root rot of alfalfa.**

Welty, R.E. Barker, K.R.; Lindsey, D.L. St. Paul, Minn., American Phytopathological Society. Plant disease. Dec 1980. v. 64 (12). p. 1097-1099. 26 ref. (NAL Call No.: 1.9 P69P).

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Thyr, B.D. Hartman, B.J.; Hunt, O.J. (s.l.) : Agricultural Research Service, U.S. Dept. of Agriculture. Report of the ... Alfalfa Improvement Conference. Dec 1983. Includes abstract. Dec 1983. (28th). p. 27. Includes references. (NAL Call No.: 60.9 AL2).

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Wilkinson, H.T. Millar, R.L. St. Paul, American Phytopathological Society. Phytopathology. July 1982. v. 72 (7). p. 790-793. 15 ref. (NAL Call No.: 464.8 P56).

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Welty, R.E. AR-SO. Rawlings, J.O. St. Paul, Minn., American Phytopathological Society. Plant disease. May 1980. v. 64 (5). p. 476-478. 19 ref. (NAL Call No.: 1.9 P69P).

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Peaden, R.N. Christen, A.A. Madison, Wis., American Society of Agronomy. Agronomy abstracts. 1979. 1979. p. 71-72. (NAL Call No.: 241 AM39).

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Elgin, J.H. Jr. Ostazeski, S.A. Madison, Wis., Crop Science Society of America. Crop science. Jan/Feb 1982. v. 22 (1). p. 39-42. Includes 10 ref. (NAL Call No.: 64.8 C883).

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0666

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0667

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Cowling, W.A. Gilchrist, D.G. St. Paul, Minn., American Phytopathological Society. Phytopathology. Jan 1982. v. 72 (1). p. 36-42. ill. Includes 23 ref. (NAL Call No.: 464.8 P56).

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Emberger, G. Welty, R.E. (s.l.) : Agricultural Research Service, U.S. Dept. of Agriculture. Report of the ... Alfalfa Improvement Conference. Dec 1983. Includes abstract. Dec 1983. (28th). p. 40. (NAL Call No.: 60.9 AL2).

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Thyr, B.D. Hunt, D.J. Madison, Wis., American Society of Agronomy. Agronomy abstracts. 1979. 1979. p. 79. (NAL Call No.: 241 AM39).

0672

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Donnelly, E.D. Auburn, Ala., The Station. Highlights of agricultural research - Alabama, Agricultural Experiment Station. Summer 1982. v. 29 (2). p. 7. ill. (NAL Call No.: 100 AL1H).

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Kuan, T.L. Erwin, D.C. St. Paul, Minn., American Phytopathological Society. Phytopathology. Apr 1980. v. 70 (4). p. 333-338. ill. 27 ref. (NAL Call No.: 464.8 P56).



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Pratt, R.G. Knight, W.E. St. Paul, American Phytopathological Society. Plant disease. Nov 1982. v. 66 (11). p. 1021-1023. ill. 13 ref. (NAL Call No.: 1.9 P69P).

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0677

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PHYTAJ. Skinner, D.Z. Stuteville, D.L. St. Paul, Minn. : American Phytopathological Society. Phytopathology. Jan 1985. v. 75 (1). p. 119-121. Includes 18 references. (NAL Call No.: DNAL 464.8 P56).

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Growth and pathogenicity of alfalfa strain of *Verticillium albo-atrum*.  
Christen, A.A. French, R.C. St. Paul, Minn., American Phytopathological Society. Plant disease. May 1982. v. 65 (5). p. 416-418. Includes 15 ref. (NAL Call No.: 1.9 P69P).

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Greenhalgh, F.C.FNETD. (s.l.) : The Society. Fungicide and nematicide tests : results - American Phytopathological Society. 1983. v. 38. p. 47. (NAL Call No.: 464.9 AM31R).

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Semeniuk, G. Adams, M.W. Pierre, S. Dak., South Dakota Academy of Science. Proceedings South Dakota Academy of Science. 1978. v. 57. p. 73-80. ill. 12 ref. (NAL Call No.: 500 S082).

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Hamm, P.B. Hansen, E.M. St. Paul, Minn., American Phytopathological Society. Phytopathology. Jan 1981. v. 71 (1). p. 65-68. 20 ref. (NAL Call No.: 464.8 P56).

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**Influence of fungicide and insecticide applications on persistence of ladino clover (*Forage legume production, North Carolina*).**  
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**Influence of the pathogen on disease severity in *Stemphylium* (botryosum) leafspot of alfalfa in California (*Pleospora herbarum*).**  
Cowling, W.A. Gilchrist, D.G. St. Paul, Minn., American Phytopathological Society. Phytopathology. Dec 1980. v. 70 (12). p. 1148-1153. ill. 17 ref. (NAL Call No.: 464.8 P56).

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**Influence of vesicular-arbuscular mycorrhizae (*Glomus fasciculatus*) on *Phytophthora* root rot of three crop plants (Oranges, avocados, alfalfa).**  
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0693

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**Inheritance of *Fusarium* wilt resistance in alfalfa.**  
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**Inheritance of resistance to *Fusarium* wilt in alfalfa (*Germplasms, Medicago sativa*).**  
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0696

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**Inheritance of resistance to *Phytophthora megasperma* (root rot) in tetraploid alfalfa.**  
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0698

**Interaction between *Fusarium oxysporum* f. sp. *medicaginis* and *Corynebacterium insidiosum* in alfalfa (*Medicago sativa*, fungal and bacterial wilts).**  
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Investigations on distribution, growth rate, resistance to, and host range of race 1 and 2 of *Colletotrichum trifolii* (Anthracnose, alfalfa).

Welty, R.E. Gurgis, R.Y.; Rowe, D.E. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC - United States Dept. of Agriculture, Science and Education Administration. Agricultural Research. North Central Region. May 1981. May 1981. (19). p. 34. (NAL Call No.: aS21.A75U69).

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Schoen, J.F.AOSNA. Payne, R.C. (s.l.) : The Association. The Newsletter of the Association of Official Seed Analysts. Feb 1983. v. 57 (1). p. 61-63. Includes references. (NAL Call No.: 61.9 AS7N).

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0702

Low-temperature interactions in *Fusarium* wilt and root rot of alfalfa (*Fusarium oxysporum* f. sp. *medicaginis* and *Fusarium acuminatum*, respectively, on *Medicago sativa*).

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Mechanisms of seed contamination by *Verticillium albo-atrum* in alfalfa.

PHYTAU. Huang, H.C. Hanna, M.R.; Kokko, E.G. St. Paul, Minn. : American Phytopathological Society. Phytopathology. Apr 1985. v. 75 (4). p. 482-488. ill. Includes 22 references. (NAL Call No.: DNAL 464.8 P56).

0704

Morphology, pathogenicity, and host range of *Phytophthora megasperma*, *Phytophthora erythroseptica*, and *Phytophthora parasitica* from arrowleaf clover.

Pratt, R.G. St. Paul, Minn., American Phytopathological Society. Phytopathology. Mar 1981. v. 71 (3). p. 276-282. ill. 33 ref. (NAL Call No.: 464.8 P56).

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Fort Atkinson, Wis., W.D. Hoard & Son. Hoard's dairyman. Mar 25, 1981. v. 125, i.e. 126 (6). p. 464-465. (NAL Call No.: 44.8 H65).

0706

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PHYTAU. Pratt, R.G. St. Paul, Minn. : American Phytopathological Society. Phytopathology. Oct 1984. v. 74 (10). p. 1152-1156. ill. Includes 18 references. (NAL Call No.: DNAL 464.8 P56).

0707

A new race of *Colletotrichum trifolii* on alfalfa in Oklahoma (*Medicago sativa*, cultivars, resistance).

Allen, S.U. Barnes, G.L.; Caddel, J.L. St. Paul, Minn., American Phytopathological Society. Plant disease. Oct 1982. v. 66 (10). p. 922-924. ill. 22 ref. (NAL Call No.: 1.9 P69P).

0708

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Pratt, R.G. St. Paul, American Phytopathological Society. Phytopathology. June 1982. v. 72 (6). p. 622-627. ill. 38 ref. (NAL Call No.: 464.8 P56).

0708

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Cruickshank, I.A.M. Spencer, K. London. Physiological plant pathology. Jan 1979. v. 14 (1). p. 71-76. ill. 14 ref. (NAL Call No.: SB599.P45).



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Leath, K.T. University Park, Pa. : The Station. Science in agriculture - Pennsylvania State University, Agricultural Experiment Station. 1984. v. 31 (1). p. 6-7. ill. (NAL Call No.: 100 P381S).

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Occurrence of a highly virulent isolate of *Colletotrichum trifolii* (anthracnose) on alfalfa in North Carolina.

Welty, R.E. Mueller, J.P. Beltsville, Md., Science and Education Administration, U.S. Dept. of Agriculture. Plant disease reporter. Aug 1979. v. 63 (8). p. 666-670. ill. 17 ref. (NAL Call No.: 1.9 P69P).

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Occurrence of a highly virulent isolate of *Colletotrichum trifolii* on alfalfa in North Carolina.

Welty, R.E. Mueller, J.P. St. Paul, American Phytopathological Society. Phytopathology. May 1979. v. 69 (5). p. 537. (NAL Call No.: 464.8 P56).

0713

Occurrence of anthracnose (*Colletotrichum*) on formerly anthracnose-resistant 'ARC' alfalfa.

Ostazeski, S.A. Elgin, J.H. Jr. St. Paul, American Phytopathological Society. Phytopathology. May 1979. v. 69 (5). p. 536. (NAL Call No.: 464.8 P56).

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Ostazeski, S.A. Elgin, J.H. Jr. Beltsville, Md., Science and Education Administration, U.S. Dept. of Agriculture. Plant disease reporter. Sept 1979. v. 63 (9). p. 734-736. ill. 7 ref. (NAL Call No.: 1.9 P69P).

0715

Occurrence of race 2 of *Colletotrichum trifolii* in North Carolina and resistance of alfalfa cultivars and breeding lines to races 1 and 2 (Fungi).

Welty, R.E. Gurgis, R.Y.; Rowe, D.E. St. Paul, Minn., American Phytopathological Society. Plant disease. Jan 1982. v. 66 (1). p. 48-51. 16 ref. (NAL Call No.: 1.9 P69P).

0716

The occurrence of race 2 of *Colletotrichum trifolii* in the Mid-Atlantic States (Alfalfa anthracnose survey).

Ostazeski, S.A. Elgin, J.H. Jr. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC - United States Dept. of Agriculture, Science and Education Administration. Agricultural Research. North Central Region. May 1981. May 1981. (19). p. 35. 3 ref. (NAL Call No.: aS21.A75U69).

0717

Overwintering and survival of *Phytophthora cinnamomi* in Fraser fir and cover cropped nursery beds in North Carolina (Root rot, *Abies fraseri*, *Secale cereale*, rye, *Trifolium incarnatum*, crimson clover).

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0718

Partial characterization of phytotoxic polysaccharides produced in vitro by *Colletotrichum trifolii* (Anthracnose of alfalfa, *Medicago sativa*).

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0719

Pathogenicity of *Fusarium roseum* 'Acuminatum' and 'Avenaceum' in roots of alfalfa, red clover, and crown vetch (Abstract only).

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0720

*Phoma* (*medicaginis*) leafspot and alfalfa quality.

Leath, K.T. Kendall, W.A. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC. United States. Dept. of Agriculture. Science and Education Administration. Agricultural Research. North Central Region. July 1979. July 1979. (7). p. 46-47. (NAL Call No.: aS21.A75U69).

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0721

**Phytophthora clandestina** sp. nov. in roots of subterranean clover.  
MYXNAE. Taylor, P.A. Pascoe, I.G.; Greenhalgh, F.C. Ithaca, N.Y. : Mycotaxon, Ltd. Mycotaxon. Jan/Mar 1985. v. 22 (1). p. 77-85. ill.  
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0722

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Tesar, M.B. East Lansing : The Station. Research report - Michigan State University, Agricultural Experiment Station. Jan 1983. Jan 1983. (444). p. 213-223. ill. 9 ref. (NAL Call No.: 284.9 M58).

0723

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0724

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0725

**Phytophthora root rot (*Phytophthora megasperma medicaginis*) of alfalfa.**  
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0726

**Potential effects of (the fungicide) thiram on medicago - *Rhizobium meliloti* symbiotic association.**  
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0727

**Powdery mildew on arrowleaf clover (*Trifolium vesiculosum*).**  
Miller, J.D. Wells, H.D. Madison : The Department. Progress report, clovers and special purpose legumes research - Univ. of Wisconsin, Dept. of Agronomy. 1983. v. 16. p. 23-24. Includes references. (NAL Call No.: SB193.P72).

0728

**Predisposition effect of water saturation of soil on *Phytophthora (megasperma)* root rot of alfalfa.**  
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0729

**Progress in selecting for resistance to *Stemphylium botryosum* (cool-temperature biotype) in alfalfa (Cultivars).**  
Gilchrist, D.G. CRPSA. Teuber, L.R.; Martensen, A.N.; Cowling, W.A. Madison : Crop Science Society of America. Crop science. Nov/Dec 1982. v. 22 (6). p. 1155-1159. ill. 17 ref. (NAL Call No.: 64.8 C883).

0730

**Protection against race 2 of *Colletotrichum trifolii* in alfalfa hypodermically inoculated with mixtures of race 1 and race 2 conidia (Abstract only).**  
Ostazeski, S.A. Elgin, J.H. Jr. St. Paul, Minn., American Phytopathological Society. Phytopathology. July 1981. v. 71 (7). p. 770. (NAL Call No.: 464.8 P56).

0731

**Quantitatively inherited reactions of alfalfa to *Peronospora trifoliorum*.**  
PHYTAJ. Skinner, D.Z. Stuteville, D.L. St. Paul, Minn. : American Phytopathological Society. Phytopathology. June 1985. v. 75 (6). p. 717-721. Includes 23 references. (NAL Call No.: DNAL 464.8 P56).

0732

**Red clover cultivar tests (Reaction to southern anthracnose disease, *Colletotrichum trifolii*).**  
Schoen, J.F. Payne, R.C. (S.I.) : The Association. The Newsletter of the Association of Official Seed Analysts. Feb 1984. v. 58 (1). p. 58-64. Includes references. (NAL Call No.: 61.9 AS7N).



0733

Registration of NMP-8 CKS5 nondormant common leaf spot resistant alfalfa germplasm (*Medicago sativa*, *Pseudopeziza medicaginis*).  
Thyr, B.D. Hunt, D.J.; Hartman, B.J.; McCoy, T.J.; Knous, T.R. Madison, Wis., Crop Science Society of America. Crop science. Mar/Apr 1982. v. 22 (2). p. 449-450. (NAL Call No.: 64.8 C883).

0734

Relationship between magnesium content of alfalfa and *Stemphylium* (botryosum) leafspot severity (Nutritional deficiencies).  
Leath, K.T. Gross, C.F. Beltsville, Md., Science and Education Administration, U.S. Dept. of Agriculture. Plant disease reporter. Sept 1979. v. 63 (9). p. 741-743. ill. 6 ref. (NAL Call No.: 1.9 P69P).

0735

Resistance induced by race 1 of *Colletotrichum trifolii* to race 2 in alfalfa resistant to race 1 (*Medicago sativa*, needle inoculation, anthracnose).  
Ostazeski, S.A. St. Paul, Minn. : American Phytopathological Society. Plant disease. Apr 1984. v. 68 (4). p. 285-288. Includes references. (NAL Call No.: 1.9 P69P).

0736

Resistance of *Medicago* species accessions to *Phytophthora megasperma* f. sp. *medicaginis*.  
Irwin, J.A.G. Maxwell, D.P. St. Paul, Minn., American Phytopathological Society. Plant disease. Apr 1980. v. 64 (4). p. 390-397. ill. 9 ref. (NAL Call No.: 1.9 P69P).

0737

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Cleveland, R.W. Risius, M.L. University Park, Pennsylvania Agricultural Experiment Station. Science in agriculture. Summer 1979. v. 26 (4). p. 11. ill. (NAL Call No.: 100 P381S).

0738

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Ostazeski, S.A. Elgin, J.H. Jr. (s.l.) : Agricultural Research Service, U.S. Dept. of Agriculture. Report of the ... Alfalfa Improvement Conference. Dec 1983. Includes abstract. Dec 1983. (28th). p. 43. (NAL Call No.: 60.9 AL2).

0739

Resistant alfalfa plants as symptomless carriers of *Verticillium albo-atrum*.  
PLDRA. Pennypacker, B.W. Leath, K.T.; Hill, R.R. Jr. St. Paul, Minn. : American Phytopathological Society. Plant disease. June 1985. v. 69 (6). p. 510-511. Includes 6 references. (NAL Call No.: DNAL 1.9 P69P).

0740

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Haaland, R.L. Hoveland, C.S. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC. United States. Dept. of Agriculture. Science and Education Administration. Agricultural Research. North Central Region. July 1979. July 1979. (7). p. 30. (NAL Call No.: aS21.A75U69).

0741

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Leath, K.T. Kendall, W.A. St. Paul, Minn., American Phytopathological Society. Phytopathology. Feb 1981. Abstract only. v. 71 (2). p. 235. (NAL Call No.: 464.8 P56).

0742

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Willis, C.B. Madison, Wis., The Department. Progress report, clovers and special purpose legumes research - Univ. of Wisconsin, Dept. of Agronomy. 1981. v. 14. p. 74-75. (NAL Call No.: SB193.P72).

0743

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Campbell, C.L. St. Paul, Minn., American Phytopathological Society. Plant disease. Oct 1980. v. 64 (10). p. 959-960. ill. 5 ref. (NAL Call No.: 1.9 P69P).

0744

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Buglos, J. Bocsa, I.; Manninger, K.; Manninger, S. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC - United States Dept. of Agriculture, Science and Education Administration. Agricultural Research. North Central Region. May 1981. May 1981. (19). p. 80-81. (NAL Call No.: aS21.A75U69).



0745

**Selection for root and crown rot resistance in alfalfa (*Fusarium* spp.).**  
Richard, C. Michaud, R.; Freve, A.; Gagnon, C. Madison, Wis., Crop Science Society of America. Crop science. Nov/Dec 1980. v. 20 (6). p. 691-695. ill. 13 ref. (NAL Call No.: 64.8 C883).

0746

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0747

**Some chemical and physical observations on alfalfa genotypes resistant to *Uromyces striatus* (Leaf rust).**  
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0748

**Some interesting alfalfa fungi (*Verticillium albo-atrum*, *Colletotrichum trifolii*, *Pyrenochaeta terrestris*).**  
Graham, J.H. Uecker, F.A. St. Paul, Minn., The Region. Agricultural reviews and manuals. ARM-NC. United States. Dept. of Agriculture. Science and Education Administration. Agricultural Research. North Central Region. July 1979. July 1979. (7). p. 37-38. (NAL Call No.: aS21.A75U69).

0749

**Stimulation of oospore production in *Phytophthora megasperma* f. sp. *medicaginis* by medicarpin (*Medicago sativa*, alfalfa, *Canavalia ensiformis*, jack beans, *Glycine max*, soybeans).**  
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0750

**Suppression of alfalfa growth by concomitant populations of *Pratylenchus penetrans* and two *Fusarium* species.**  
Mauza, B.E. Webster, J.M. Ames, Iowa, Society of Nematologists. Journal of nematology. July 1982. v. 14 (3). p. 364-367. 16 ref. (NAL Call No.: QL391.N4J62).

0751

**Survival of *Verticillium albo-atrum* from alfalfa in feces of leaf-chewing insects.**  
PHYTAU. Huang, H.C. Harper, A.M. St. Paul, Minn. : American Phytopathological Society. Phytopathology. Feb 1985. v. 75 (2). p. 206-208. Includes 20 references. (NAL Call No.: DNAL 464.8 P56).

0752

**Symptomatology and ecology of alfalfa anthracnose in Oklahoma.**  
PLDRA. Allen, S.U. Barnes, G.L.; Caddel, J.L. St. Paul, Minn. : American Phytopathological Society. Plant disease. Mar 1985. v. 69 (3). p. 248-251. ill. Includes 26 references. (NAL Call No.: DNAL 1.9 P69P).

0753

**Update on verticillium wilt of alfalfa (*Verticillium albo-atrum*, soil-borne fungi, situation in New York State).**  
Bergstrom, G. Batavia : Agricultural Divisions of Cooperative Extension, Four Western Plain Counties, N.Y. State. Ag impact. Apr 1983. Apr 1983. p. 1-2, 18. (NAL Call No.: S544.3.N7A45).

0754

***Uromyces trifolii-repentis* Liro var. *Trifolii-repentis* on *Trifolium repens* (red clover) in North Carolina (Abstract only).**  
Welty, R.E. Van Dyke, C.G.; Cope, W.A. St. Paul, Minn., American Phytopathological Society. Phytopathology. July 1981. v. 71 (7). p. 772. (NAL Call No.: 464.8 P56).

0755

***Uromyces trifolii-repentis* variety *trifolii-repentis* on *Trifolium repens* in North Carolina (Rust on Ladino white clover).**  
Welty, R.E. Van Dyke, C.G.; Cope, W.A. Bronx, N.Y., New York Botanical Garden. Mycologia. Mar/Apr 1982. v. 74 (2). p. 265-270. ill. Includes 11 ref. (NAL Call No.: 450 M99).

0756

Use of hypodermic inoculations of alfalfa for identifying host reactions and races of *Colletotrichum trifolii* (Pathogen of alfalfa in the hot humid areas of the USA).  
Ostazeski, S.A. Elgin, J.H. Jr. Madison, Wis., Crop Science Society of America. Crop science. May/June 1982. v. 22 (3). p. 545-546. 8 ref. (NAL Call No.: 64.8 C883).

0757

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0758

Variability and interaction between alfalfa cultivars and isolates of *Phytophthora megasperma*.  
PHYTAJ. Faris, M.A. St. Paul, Minn.: American Phytopathological Society. Phytopathology. Apr 1985. v. 75 (4). p. 390-394. Includes 27 references. (NAL Call No.: DNAL 464.8 P56).

0759

*Verticillium (albo-atrum)* wilt in alfalfa (Pacific Northwest).  
Christen, A.A. Peaden, R.N. St. Paul, Minn., American Phytopathological Society. Plant disease. Apr 1981. v. 65 (4). p. 319-321. ill. 13 ref. (NAL Call No.: 1.9 P69P).

0760

*Verticillium (albo-atrum)* wilt of alfalfa in the Pacific Northwest.  
Christen, A.A. Peaden, R.N. Madison, Wis., American Society of Agronomy. Agronomy abstracts. 1979. 1979. p. 59. (NAL Call No.: 241 AM39).

0761

The *Verticillium* connection--alfalfa wilt.  
Yarris, L. Washington, D.C., The Service. Agricultural research - United States Agricultural Research Service. Sept 1981. v. 30 (3). p. 8. ill. (NAL Call No.: 1.98 AG84).

0762

*Verticillium* wilt is found in Minnesota alfalfa fields (*Verticillium albo-atrum*).  
Sperbeck, J. St. Paul, Minn., The Station. Minnesota science - Minnesota, Agricultural Experiment Station. 1982. v. 36 (4). p. 13-14. (NAL Call No.: 100 M668).

0763

*Verticillium* wilt of alfalfa.  
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0764

*Verticillium* wilt of alfalfa--a new disease for Wisconsin.  
Grau, C.R. Delwiche, P.A.; Rohweder, D.A. Madison, Wis., The Programs. Publication - Cooperative Extension Programs, University of Wisconsin Extension. Jan 1982. Jan 1982. (A3165). 4 p. ill. (NAL Call No.: S544.3.W6W53).

0765

*Verticillium* wilt of alfalfa in Pennsylvania.  
Leath, K.T. (s.l.): Agricultural Research Service, U.S. Dept. of Agriculture. Report of the ... Alfalfa Improvement Conference. Dec 1983. Includes abstract. Dec 1983. (28th). p. 35. (NAL Call No.: 60.9 AL2).

0766

*Verticillium* wilt of alfalfa in Wyoming (*Verticillium albo-atrum*, *Medicago sativa*).  
Gray, F.A. Roth, D.A. St. Paul, American Phytopathological Society. Plant disease. Nov 1982. v. 66 (11). p. 1080. 8 ref. (NAL Call No.: 1.9 P69P).

0767

*Verticillium* wilt of alfalfa (Symptoms, resistant varieties, Wyoming).  
Roth, D. BAESD. Laramie: The Service. Bulletin - Wyoming University, Agricultural Extension Service. June 1982. June 1982. (724.8). 3 p. ill. (NAL Call No.: 275.29 W99B).

## (PLANT DISEASES - FUNGAL)

0768

Virulence differences between *Fusarium roseum* "Acuminatum" and *Fusarium roseum* "Avenaceum" in red clover (*Trifolium pratense*, length of necrosis, fungal penetration and colonization of roots).

Stutz, J.C. PHYTAJ. Leath, K.T. St. Paul : American Phytopathological Society. Phytopathology. Dec 1983. v. 73 (12). p. 1648-1651. Includes references. (NAL Call No.: 464.8 P56).

and seed production. 1977. v. 21 (6). p. 511-536. ill. Bibliography p. 534-535. (NAL Call No.: 64.8 H66).

0769

Virulence of North American and European isolates of *Verticillium albo-atrum* on alfalfa cultivars (*Medicago sativa*, wilt).

Christen, A.A. PHYTA. Peadar, R.N.; Harris, G.P.; Heale, J.B. St. Paul : American Phytopathological Society. Phytopathology. July 1983. v. 73 (7). p. 1051-1054. Includes references. (NAL Call No.: 464.8 P56).

0770

Water mold root rot of alfalfa / G. L. Worf.

Worf, G. L. Madison Cooperative Extension Programs, University Extension, University of Wisconsin 1969. (2) p. : ill. ; 28 cm. -. (NAL Call No.: S544.3.W6W52 No.29).

0771

Yield reduction and stand losses of alfalfa associated with *Phytophthora* root rot in Wyoming.

Bohl, W.H. Gray, F.A.; Abernethy, R.H. (s.l.) : Agricultural Research Service, U.S. Dept. of Agriculture. Report of the ... Alfalfa Improvement Conference. Dec 1983. Includes abstract. Dec 1983. (28th). p. 37. Includes references. (NAL Call No.: 60.9 AL2).

0772

Yield reduction in white clover due to root rots and virus diseases.

Campbell, C.L. Moyer, J.W. Madison : The Department. Progress report, clovers and special purpose legumes research - Univ. of Wisconsin, Dept. of Agronomy. 1982. v. 15. p. 66-67. (NAL Call No.: SB193.P72).

0773

Method of breeding clover for resistance to stem rot, *Sclerotinia trifoliorum* Erikss. I. Basic investigations and phytopathological methodology in the breeding of clover for resistance to *Sclerotinia trifoliorum* Erikss.

Wierzbicka, B. Warszawa, Państwowe Wydawn. Rolnicze i Lesne. Hodowla roślin aklimatyzacja i nasiennictwo. Plant breeding, acclimatization



# PLANT DISEASES - BACTERIAL

0774

**An association between resistance to bacterial wilt (*Corynebacterium insidiosum*) and nitrogen fixation in alfalfa (*Rhizobium meliloti*).**  
Viands, D.R. Barnes, D.K.; Frosheiser, F.I. Madison, Wis., Crop Science Society of America. Crop science. Nov/Dec 1980. v. 20 (6). p. 699-703. 12 ref. (NAL Call No.: 64.8 C883).

0775

**Association of *Serratia marcescens* with crown rot of alfalfa in Pennsylvania (*Medicago sativa*).**  
Lukezic, F.L. Hildebrand, D.C.; Schroth, M.N.; Shinde, P.A. St. Paul, American Phytopathological Society. Phytopathology. July 1982. v. 72 (7). p. 714-718. ill. 27 ref. (NAL Call No.: 464.8 P56).

0776

**Contributions of resistance to anthracnose, bacterial wilt and *Phytophthora* root rot to persistence and yield of alfalfa under irrigation.**  
Buss, G.R. AR. Beltsville, Md., The Region. ARS-NE - United States Agricultural Research Service, Northeastern Region. Feb 1978. Feb 1978. (90). p. 37. (NAL Call No.: aS21.A75U45).

0777

**Crown rot of alfalfa in Utah (*Fusarium* spp., *Serratia marcescens*, *Pseudomonas marginalis* var. *alfalfae*, *Medicago sativa*).**  
Turner, V. PHYTA. Van Alfen, N.K. St. Paul : American Phytopathological Society. Phytopathology. Sept 1983. v. 73 (9). p. 1333-1337. ill. Includes references. (NAL Call No.: 464.8 P56).

0778

**Halo blight of timothy / by Paul Alan Taylor.**  
Taylor, Paul Alan, 1944. 1971. Thesis (Ph.D.)--University of Wisconsin, 1971. Photocopy. Ann Arbor, Mich. : University Microfilms, 1972. x, 88 leaves ; 21 cm. Bibliography: leaves 83-88. (NAL Call No.: DISS 71-29,016).

0779

**Influence of *Corynebacterium insidiosum* on water relations of alfalfa.**  
Dey, R. Van Alfen, N.K. St. Paul, Minn., American Phytopathological Society. Phytopathology. Sept 1979. v. 69 (9). p. 942-946. ill. 26 ref. (NAL Call No.: 464.8 P56).

0780

**Inheritance of resistance to bacterial wilt (caused by *Corynebacterium insidiosum*) in two alfalfa gene pools: qualitative analysis.**  
Viands, D.R. AR-NC. Barnes, D.K. Madison, Wis., Crop Science Society of America. Crop science. Jan/Feb 1980. v. 20 (1). p. 48-54. ill. 22 ref. (NAL Call No.: 64.8 C883).

0781

**Inheritance of resistance to bacterial wilt (*Corynebacterium insidiosum*) in two alfalfa gene pools: response to selection and quantitative analysis.**  
Viands, D.R. Barnes, D.K. Madison, Wis., Crop Science Society of America. Crop science. Sept/Oct 1979. v. 19 (5). p. 711-714. ill. 24 ref. (NAL Call No.: 64.8 C883).

0782

**Interaction between *Fusarium oxysporum* f. sp. *medicaginis* and *Corynebacterium insidiosum* in alfalfa (*Medicago sativa*, fungal and bacterial wilts).**  
Johnson, L.E.B. Frosheiser, F.I.; Wilcoxson, R.D. St. Paul, Minn., American Phytopathological Society. Phytopathology. May 1982. v. 72 (5). p. 517-522. ill. Includes 11 ref. (NAL Call No.: 464.8 P56).

0783

**Interactions among selected endoparasitic nematodes and three pseudomonads on alfalfa (*Pseudomonas viridiflava*, *Pseudomonas corrugata*, *Pseudomonas marginalis*).**  
Bookbinder, M.G. Bloom, J.R.; Lukezic, F.L. Ames, Iowa, Society of Nematologists. Journal of nematology. Jan 1982. v. 14 (1). p. 105-109. Includes 9 ref. (NAL Call No.: QL391.N4J62).

0784

**Macromolecular plant-wilting toxins: artifacts of the bioassay method? (*Corynebacterium insidiosum*, alfalfa).**  
Van Alfen, N.K. McMillan, B.D. St. Paul, Minn., American Phytopathological Society. Phytopathology. Jan 1982. v. 72 (1). p. 132-135. Includes 13 ref. (NAL Call No.: 464.8 P56).

0785

**Phloem-limited prokaryotes in sieve elements isolated by enzyme treatment of diseased plant tissues (*Catharanthus roseus*, *Spiroplasma citri*, mycoplasma-like organisms, clover club leaf).**  
Lee, I.M. PHYTA. Davis, R.E. St. Paul : American Phytopathological Society. Phytopathology. Nov

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1983. v. 73 (11). p. 1540-1543. ill. Includes references. (NAL Call No.: 464.8 P56).

**0786**

**Pseudomonas corrugata, a pathogen of tomato, isolated from symptomless alfalfa roots.**  
Lukezic, F.L. St. Paul, American Phytopathological Society. Phytopathology. Jan 1979. v. 69 (1). p. 27-31. ill. 19 ref. (NAL Call No.: 464.8 P56).

**0787**

**Root and crown rot diseases of alfalfa.**  
Watkins, John E. Kehr, William R. & NebGuide. Document available from: University of Nebraska-Lincoln, Dept. of Agricultural Communications, Lincoln, Nebraska 68583 1980. Discusses many root and crown rot diseases of alfalfa. 4 p. : ill. (NAL Call No.: Document available from source.). (NAL Call No.: G 80-494).

**0788**

**Studies on Corynebacterium insidiosum and bacterial wilt of alfalfa / by Robert Buck Carroll.**  
Carroll, Robert Buck. 1971. Thesis (Ph.D.)--Pennsylvania State University. 1971. Photocopy of typescript. Ann Arbor: University Microfilms, 1972. vii, 124 leaves ; 21 cm. Bibliography: leaves 91-100. (NAL Call No.: DISS 72-13,828).

**0789**

**Studies on the nature of resistance in alfalfa plants to bacterial wilt / by Yong Sup Cho.**  
Cho, Yong Sup. 1970. Thesis--University of Minnesota. Photocopy of typescript. Ann Arbor: University Microfilms, 1971. 74 leaves. Bibliography: leaves 69-74. (NAL Call No.: DISS 70-27,106).

**0790**

**The transfer of rhizobial components to the clover host during nodulation / by Milton Lynn Bruening.**  
Bruening, Milton Lynn. 1943. 1971. Thesis (Ph.D.)--University of Utah. 1971. Photocopy. Ann Arbor, Mich. : University Microfilms, 1971. vii, 128 leaves ; 21 cm. Bibliography: leaves 105-111. (NAL Call No.: DISS 71-24,384).

# PLANT DISEASES - VIRAL

0791

**Activation of the genome of alfalfa mosaic virus is enhanced by the presence of the coat protein on all three genome parts.**

Smit, C.H. Jaspars, E.M.J. New York, Academic Press. Virology. July 30, 1980. v. 104 (2). p. 454-461. ill. Bibliography p. 460-461. (NAL Call No.: 448.8 V81).

0792

**Alterations in chloroplast and cell membranes associated with cAMP-induced dissociation of starch grains in clover yellow mosaic virus infected clover.**

Tu, J.C. Ottawa. Canadian journal of botany. Feb 15, 1979. v. 57 (4). p. 360-369. ill. 16 ref. (NAL Call No.: 470 C16C).

0793

**The assembly of clover yellow mosaic virus and its protein.**

Bancroft, J.B. Abouhaidar, M. New York, Academic Press. Virology. Oct 15, 1979. v. 98 (1). p. 121-130. ill. 17 ref. (NAL Call No.: 448.8 V81).

0794

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Mishra, M.D. Raychaudhuri, S.P.; Ghosh, A.; Wilcoxson, R.D. St. Paul, Minn., American Phytopathological Society. Plant disease. May 1980. v. 64 (5). p. 490-492. ill. 14 ref. (NAL Call No.: 1.9 P69P).

0795

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0796

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Hiruki, C. Rao, D.V.; Chen, M.H.; Dkuno, T.; Figueiredo, G. St. Paul, Minn. : American Phytopathological Society. Phytopathology. 1984. v. 74 (4). p. 482-486. ill. Includes references. (NAL Call No.: 464.8 P56).

0797

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0798

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Zuidema, D. VIRA. Bierhuizen M.F.A.; Cornelissen, B.J.C.; Bol, J.F.; Jaspars, E.M.J. New York : Academic Press. Virology. Mar 1983. v. 125 (2). p. 361-369. ill. Includes references. (NAL Call No.: 448.8 V81).

0799

**Comparative investigations on the coat protein binding sites of the genomic RNAs of alfalfa mosaic and tobacco streak viruses.**

Zuidema, D. Jaspars, E.M.J. New York, N.Y. : Academic Press. Virology. May 1984. v. 135 (1). p. 43-52. ill. Includes references. (NAL Call No.: 448.8 V81).

0800

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Houwing, C.L. Jaspars, E.M.J. Easton, Pa., American Chemical Society. Biochemistry. Nov 11, 1980. v. 19 (23). p. 5255-5260. ill. 30 ref. (NAL Call No.: 381 B523).

0801

**Disease interactions of bean yellow mosaic virus and *Phytophthora* species in arrowleaf clover (Abstract only).**

Pratt, R.G. Knight, W.E.; Barnett, D.W. St. Paul, Minn., American Phytopathological Society. Phytopathology. Aug 1981. v. 71 (8). p. 900. (NAL Call No.: 464.8 P56).

0802

**Effects of a necrosis-inducing isolate of alfalfa mosaic virus on stand loss in tomatoes (*Lycopersicon esculentum*).**

Knorr, D.A. PHYTA. Laemmlein, F.F.; Dawson, W.D. St. Paul : American Phytopathological Society. Phytopathology. Nov 1983. v. 73 (11). p. 1554-1558. ill. Includes references. (NAL Call No.: 464.8 P56).



## (PLANT DISEASES - VIRAL)

0803

**Effects of alfalfa mosaic, clover yellow vein, and peanut stunt viruses on growth and nodulation of white clover.**  
Gibson, P.B. AR-SO. Barnett, D.W.; Skipper, H.D. St. Paul, Minn., American Phytopathological Society. Phytopathology. June 1980. Abstract only. v. 70 (6). p. 567. (NAL Call No.: 464.8 P56).

0804

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Gibson, P.B. Barnett, D.W.; Skipper, H.D.; McLaughlin, M.R. St. Paul, Minn., American Phytopathological Society. Plant disease. Jan 1981. v. 65 (1). p. 50-51. 15 ref. (NAL Call No.: 1.9 P69P).

0805

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Ellsbury, M.M. Madison : The Department. Progress report, clovers and special purpose legumes research - Univ. of Wisconsin, Dept. of Agronomy. 1982. v. 15. p. 60-61. (NAL Call No.: SB193.P72).

0806

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Hampton, R.C. St. Paul, Minn., American Phytopathological Society. Phytopathology. Feb 1981. Abstract only. v. 71 (2). p. 223. (NAL Call No.: 464.8 P56).

0807

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Smit, C.H. Roosien, J.; Vloten-Doting, L. van.; Jaspars, E.M.J. New York, Academic Press. Virology. July 15, 1981. v. 112 (5). p. 169-173. 11 ref. (NAL Call No.: 448.8 V81).

0808

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Smit, C.H. Jaspars, E.M.J. New York, Academic Press. Virology. Feb 1982. v. 117 (1). p. 271-274. Includes 26 ref. (NAL Call No.: 448.8 V81).

0809

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Gibson, P.B. Barnett, D.W.; Burrows, P.M.; King, F.D. St. Paul, Minn., American Phytopathological Society. Plant disease. Feb 1982. v. 66 (2). p. 142-144. ill. Includes 11 ref. (NAL Call No.: 1.9 P69P).

0810

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Smith, G.R. McLaughlin, M.R. College Station, Tex. : The Station. PR - Texas Agricultural Experiment Station. Oct 1983. Oct 1983. (4141). p. 151-152. (NAL Call No.: 100 T31P).

0811

**Inhibition of alfalfa mosaic virus RNA and protein synthesis by actinomycin D and cycloheximide (*Medicago sativa*).**  
Nassuth, A. VIRLA. Alblas, F.; van der Geest, A.J.M.; Bol, J.F. New York : Academic Press. Virology. Apr 30, 1983. v. 126 (2). p. 517-524. ill. Includes references. (NAL Call No.: 448.8 V81).

0812

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Pratt, R.G. Ellsbury, M.M.; Barnett, D.W.; Knight, W.E. St. Paul, Minn., American Phytopathological Society. Phytopathology. Sept 1982. v. 72 (9). p. 1189-1192. 30 ref. (NAL Call No.: 464.8 P56).

0813

**Lack of serological relationship between the 35K nonstructural protein of alfalfa mosaic virus and the corresponding proteins of three other plant viruses with a tripartite genome.**  
Van Tol, R.G.L. Van Vloten-Doting, L. New York, Academic Press. Virology. Mar 1981. v. 109 (2). p. 444-447. ill. 21 ref. (NAL Call No.: 448.8 V81).

0814

**Limited sequence variation in the leader sequence of RNA 4 from several strains of alfalfa mosaic virus.**  
Swinkels, P.P.H. Bol, J.F. New York, Academic Press. Virology. Oct 15, 1980. v. 106 (1). p. 145-147. ill. 14 ref. (NAL Call No.: 448.8 V81).

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0815

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0816

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0817

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0818

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0819

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0820

**Properties of solubilized RNA-dependent RNA polymerase from alfalfa mosaic virus-infected and healthy tobacco plants.**  
 Clerx, C.M. Bol, J.F. New York. Virology. Dec 1978. v. 91 (2). p. 453-463. ill. 25 ref. (NAL Call No.: 448.8 V81).

0821

**Purification and characterization of the infectious entities of alfalfa looper nuclear polyhedrosis virus produced in cells cultured in vitro / by William A. Ramoska.**  
 Ramoska, William A., 1949. Ann Arbor, Mich. University Microfilms International 1976. Thesis--Ohio State University, 1975. Facsimile produced by microfilm-xerography. vi, 99 leaves. Bibliography: leaves 89-99. (NAL Call No.: DISS 76-10,032).

0822

**Removal of the N-terminal part of alfalfa mosaic virus coat protein interferes with the specific binding to RNA 1 and genome activation (Medicago sativa).**  
 Zuidema, D.VIRLA. Bierhuizen, M.F.A.; Jaspars, E.M.J. New York : Academic Press. Virology. Sept 1983. v. 129 (2). p. 255-260. ill. Includes references. (NAL Call No.: 448.8 V81).

0823

**Replication of temperature-sensitive mutants of alfalfa mosaic virus in protoplasts (Medicago sativa).**  
 Sarachu, A.N.VIRLA. Nassuth, A.; Roosien, J.; Vloten-Doting, L. van; Bol, J.F. New York : Academic Press. Virology. Feb 1983. v. 125 (1). p. 64-74. ill. 3 p. ref. (NAL Call No.: 448.8 V81).

0824

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 Francki, R.I.B. Chu, P.W.G.; Keese, P.K. Cold Spring Harbor, N.Y. : Cold Spring Harbor Laboratory, c1983. Plant infectious agents : viruses, viroids, virusoids, and satellites / edited by H.D. Robertson ... (et al.). p. 175-180. ill. Includes references. (NAL Call No.: SB736.P56).

0825

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 Gerhardson, B. Insunza, V. Berlin. Phytopathologische Zeitschrift. Jan 1979. v. 94 (1). p. 67-71. ill. 10 ref. (NAL Call No.: 464.8 P562).

0826

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0827

**Strain relationships in alfalfa mosaic virus / by Fred Walter Schwenk.**

Schwenk, Fred Walter, 1938. 1969. Thesis (Ph.D.)--University of California, Berkeley, 1969. Photocopy. Ann Arbor, Mich. : University Microfilms, 1971. iv, 61 leaves ; 21 cm. Bibliography: leaves 58-61. (NAL Call No.: DISS 70-13,162).

0828

**Subterranean clover red leaf virus disease: effect of temperature on plant symptoms, growth, and virus content.**

PHYTAJ. Helms, K. Waterhouse, P.M.; Muller, W.J. St. Paul, Minn. : American Phytopathological Society. Phytopathology. Mar 1985. v. 75 (3). p. 337-341. Includes 15 references. (NAL Call No.: DNAL 464.8 P56).

0829

**Trifolium (viral disease) investigations at Clemson.**

Gibson, P.B. Barnett, O.W. Madison, Wis., The Department. Progress report, clovers and special purpose legumes research. Wisconsin. University. Dept. of Agronomy. 1978. v. 11. p. 65-71. ill. 5 ref. (NAL Call No.: SB193.P72).

0830

**Virus diseases of red clover / by Donald Lee Stuteville.**

Stuteville, Donald Lee, 1930. 1964. Thesis (Ph.D.)--University of Wisconsin, 1964. Photocopy. Ann Arbor, Mich. : University Microfilms International, 1978. v, 128 leaves ; 21 cm. Includes bibliographies. (NAL Call No.: DISS 64-10,320).

0831

**Virus infection of Trifolium species in cell suspension cultures (Forage legumes).**

Jones, R.A. Rupert, E.A.; Barnett, O.W. St. Paul, Minn., American Phytopathological Society. Phytopathology. Feb 1981. v. 71 (2). p. 116-119. ill. 13 ref. (NAL Call No.: 464.8 P56).

0832

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Gibson, P.B. Barnett, O.W. Beltsville, Md., Science and Education Administration, U.S. Dept. of Agriculture. Plant disease reporter. Apr 1979. v. 63 (4). p. 297-300. ill. 6 ref. (NAL Call No.: 1.9 P69P).

0833

**Virus protein synthesis in alfalfa mosaic virus infected alfalfa protoplasts (Purified from Nicotiana tabacum, tobacco, infection of Medicago sativa).**

Samac, D.A. Nelson, S.E.; Loesch-Fries, L.S. New York : Academic Press. Virology. Dec 1983. v. 131 (2). p. 455-462. ill. Includes references. (NAL Call No.: 448.8 V81).

0834

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Phillips, G.C. Collins, G.B. Madison, Crop Science Society of America. Crop science. Mar/Apr 1979. v. 19 (2). p. 213-216. ill. 15 ref. (NAL Call No.: 64.8 C883).

0835

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Cope, W.A. Madison, Wis., The Department. Progress report, clovers and special purpose legumes research. Wisconsin. University. Dept. of Agronomy. 1978. v. 11. p. 58-59. ill. 3 ref. (NAL Call No.: SB193.P72).

0836

**Viruses in Louisiana white clover.**

Harville, B.G. LA. Baton Rouge, The Station. Louisiana agriculture. Louisiana. Agricultural Experiment Station. Winter 1979/80. v. 23 (2). p. 3, 15. ill. (NAL Call No.: 100 L939).

0837

**Viruses infecting red clover in Pennsylvania (Trifolium pratense).**

Leath, K.T. Barnett, O.W. St. Paul, Minn., American Phytopathological Society. Plant disease. Dec 1981. v. 65 (12). p. 1016-1017. 6 ref. (NAL Call No.: 1.9 P69P).

0838

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Campbell, C.L. Moyer, J.W. Madison : The Department. Progress report, clovers and special purpose legumes research - Univ. of Wisconsin, Dept. of Agronomy. 1982. v. 15. p. 66-67. (NAL Call No.: SB193.P72).



0839

**Yield responses of six white clover clones to virus infection under field conditions.**

PLDRA. Campbell, C.L. Moyer, J.W. St. Paul, Minn. : American Phytopathological Society. Plant disease. Dec 1984. v. 68 (12). p. 1033-1035. Includes 12 references. (NAL Call No.: DNAL 1.9 P69P).

0840

**3'-terminal nucleotide sequence of alfalfa mosaic virus RNA 4.**

Koper-Zwarthoff, E.C. Bol, J.F. Washington. Proceedings National Academy of Sciences. Mar 1979. v. 76 (3). p. 1114-1117. ill. 22 ref. (NAL Call No.: 500 N21P).

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0841

## **Alfalfa analyst.**

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0842

## **Bermudagrass hay depletes soil potassium (Deficiency symptoms and yield decreases of successive corn crops, Alabama).**

Burmester, C.H. Adams, F. Atlanta : Potash & Phosphate Institute. Better crops with plant food. Winter 1983/1984. v. 68. p. 18-19. (NAL Call No.: 6 B46).

0843

## **Chlorine deficiency in red clover grown in solution culture.**

JPNUDS. Whitehead, D.C. New York, N.Y. : Marcel Dekker. Journal of plant nutrition. 1985. v. 8 (2). p. 193-198. ill. Includes 6 references. (NAL Call No.: DNAL QK867.J67).

0844

## **Clover failure by A.J. Pieters . -.**

Pieters, A. J. Washington, D.C. : U.S. Dept. of Agriculture, 1924. 24 p. : ill. -. Includes bibliographical references. (NAL Call No.: DNAL Fiche S-70 no.1365).

0845

## **Diagnosis of sulphur deficiency in subterranean clover (*Trifolium subterraneum*, sulfur).**

Spencer, K. Freney, J.R.; Jones, M.B. Washington, D.C. : The Sulphur Institute. Sulphur in agriculture. 1977. v. 1. p. 12-15, 17. ill. Includes references. (NAL Call No.: S587.5.S9S9).

0846

## **Irrigated alfalfa: potassium deficiency in semi-arid soils (Evapotranspiration, leaching, Utah).**

James, D.W. Atlanta, Ga. : Potash & Phosphate Institute. Better crops with plant food. Summer 1984. v. 68. p. 24-25. ill. (NAL Call No.: 6 B46).

0847

## **Is it dry weather, lack of boron or leafhopper damage? (Alfalfa, *Empoasca fabae*).**

Buker, R.J. Fort Atkinson, Wis., W.D. Hoard & Son. Hoard's dairyman. June 25, 1980. v. 125 (12). p. 889. ill. (NAL Call No.: 44.8 H65).

0848

## **Mechanical disruption of leaf tissues and cells in some bloat-causing (alfalfa, white clover, red clover) and bloat-safe (birdsfoot trefoil, cicer milkvetch, sainfoin) forage legumes.**

Lees, G.L. Howarth, R.E.; Goplen, B.P.; Fesser, A.C. Madison, Wis., Crop Science Society of America. Crop science. May/June 1981. v. 21 (3). p. 444-448. ill. 7 ref. (NAL Call No.: 64.8 C883).

0849

## **Relationships of planting density and competition to growth characteristics and internal crown breakdown in arrowleaf clover (*Trifolium vesiculosum*, noninfectious disease).**

Pratt, R.G. PHYTA. Knight, W.E. St. Paul : American Phytopathological Society. Phytopathology. July 1983. v. 73 (7). p. 980-983. ill. Includes references. (NAL Call No.: 464.8 P56).

# MISCELLANEOUS PLANT DISORDERS

0850

**Comparative studies of foliar protection from ozone induced by EDU ("N-(2-(2-oxo-1-imidazolidiny1) ethyl)-N'-phenylurea,") in greenhouse and growth chamber preconditioned plants (Beans, red clover, soybeans, cotton).**

Lee, E.H. AR-BARC. Bennett, J.H. Longmont, Colo., The Group. Proceedings - Plant Growth Regulator Working Group. Plant Growth Regulator Working Group. 1979. Abstract only. 1979. (6th). p. 218. (NAL Call No.: SB128.P5).

0851

**Effect of an ozone injury retardant chemical on isozyme profiles from alfalfa callus in vitro (Medicago sativa).**

Rier, J.P. Jr. PHYTA. Sood, V.K.; Whitaker, A.; Watson, C. St. Paul : American Phytopathological Society. Phytopathology. Sept 1983. v. 73 (9). p. 1262-1266. Includes references. (NAL Call No.: 464.8 P56).

0852

**Evaluation of annual and perennial clovers for tolerance to 2,4-D (a preliminary report) (Clover varieties, herbicide toxicity, pastures).**

Taylor, R.W. Griffin, J.L.; Meche, G.A. Crowley : The Station. Annual progress report - Louisiana, Rice Experiment Station. 1982. 1982. (74th). p. 424-425. (NAL Call No.: 100 L93 (3)).

0853

**Evaluation of annual and perennial clovers for tolerance to 2,4-D (Herbicide, varieties, injury).**

Taylor, R.W. Griffin, J.L.; Meche, G.A. Madison : The Department. Progress report, clovers and special purpose legumes research - Univ. of Wisconsin, Dept. of Agronomy. 1982. v. 15. p. 46-47. (NAL Call No.: SB193.P72).

0854

**Influence of date and method of metribuzin application for quackgrass control in alfalfa (Medicago sativa, Agropyron repens, herbicide phytotoxicity, weed control, Wisconsin).**

Leroux, G.D. AGUOA. Harvey, R.G. Madison : American Society of Agronomy. Agronomy journal. Sept/Oct 1983. v. 75 (5). p. 741-744. Includes references. (NAL Call No.: 4 AM34P).

0855

**Metabolism of the herbicide buthidazole in corn seedlings and alfalfa plants.**

Yu, C.C. Atallah, Y.H.; Whitacre, D.M. Washington, D.C., American Chemical Society. Journal of agricultural and food chemistry. Nov/Dec 1980. v. 28 (6). p. 1090-1095. ill. 6 ref. (NAL Call No.: 381 J8223).

0856

**Persistence of fenvalerate in alfalfa: effect of growth dilution and heat units on residue half-life (Insecticides, residues, toxicity to bees, Apis mellifera, Megachile rotundata, southern Alberta).**

Hill, B.D. Charnetski, W.A.; Schaalje, G.B.; Schaber, B.D. Washington, D.C., American Chemical Society. Journal of agricultural and food chemistry. July/Aug 1982. v. 30 (4). p. 653-657. ill. Ref. (NAL Call No.: 381 J8223).

0857

**Potential effects of (the fungicide) thiram on medicago - Rhizobium meliloti symbiotic association.**

Sirois, J.C. Peterson, E.A.; Miller, R.W. New York, Marcel Dekker. Journal of environmental science and health. Part B: Pesticides, food contaminants, and agricultural wastes. 1981. v. B16 (3). p. 293-307. 5 ref. (NAL Call No.: TD172.J61).

0858

**Residues of five pesticides in field-treated alfalfa seeds and alfalfa sprouts.**

JPFCD2. Archer, T.E. Gauer, W.O. New York, N.Y. : Marcel Dekker. Journal of environmental science and health. Part B. Pesticides, food contaminants, and agricultural wastes. 1985. v. 20 (4). p. 445-456. Includes references. (NAL Call No.: DNAL TD172.J61).

0859

**Response of arrowleaf clover to postemergence herbicides (Forage legumes, weed control, phytotoxicity).**

Conrad, J.D. Stritzke, J.F. Madison, Wis., American Society of Agronomy. Agronomy journal. July/Aug 1980. v. 72 (4). p. 670-672. 9 ref. (NAL Call No.: 4 AM34P).

0860

**Tolerance of alfalfa (Medicago sativa) to EPTC (Herbicide injury in crops).**

Dawson, J.H. WEESA. Champaign : Weed Science Society of America. Weed science. Jan 1983. v. 31 (1). p. 103-108. ill. 8 ref. (NAL Call No.: 79.8 W41).



# PROTECTION OF PLANT PRODUCTS - GENERAL AND MISC.

0861

## **Changes in round bales during storage (Ryegrass, alfalfa, losses).**

Verma, L.R.TAAEA. Nelson, B.D. St. Joseph : The Society. Transactions of the ASAE - American Society of Agricultural Engineers. Mar/Apr 1983. v. 26 (2). p. 328-332. ill. Includes references. (NAL Call No.: 290.9 AM32T).

0862

## **Compositional changes and losses in large hay bales during outside storage.**

Lechtenberg, V.L. Hendrix, K.S.; Petritz, D.C.; Parsons, S.D. State College, Pa., American Forage and Grassland Council. Forage and grassland progress. Spring 1980. v. 21. p. 2. ill. (NAL Call No.: SB193.F6).

0863

## **Effects of storage method on losses and quality changes in round bales of ryegrass and alfalfa hay.**

Nelson, B.D.LAXBA. Verma, L.R.; Montgomery, C.R. Baton Rouge : The Station. Bulletin - Louisiana Agricultural Experiment Station. June 1983. June 1983. (750). 19 p. ill. Includes references. (NAL Call No.: 100 L93 (1)).

0864

## **The spontaneous combustion of hay by Charles A. Browne.**

Browne, Charles A. Washington, D.C. U.S. Dept. of Agriculture 1929. 39 p. : ill. -. Bibliography: p. 37-38. (NAL Call No.: Fiche S-69 no.141).

0865

## **Stress metabolites of plants - A growing concern.**

Wood, Garnett E. Ames, Iowa, International Association of Milk, Food, and Environmental Sanitarians. Abstract: The concentration of certain compounds that are natural constituents of plants may increase to toxic levels under various stress conditions. The stress compounds produced in the following plants consumed directly in the United States are discussed: green beans; lima beans; broad beans; lentils; garden peas; soybeans; alfalfa; groundnuts; cowpeas; sugar beets; grapes and grapevine leaves; parsnips; parsley; celery; safflower; and mulberry plants. A multidisciplinary effort is needed to establish a monitoring system for stress compounds in food. Many plants have not yet been investigated and little consideration has been given to environmental stress from temperature, rainfall, agronomic practices, etc. In-depth toxicological studies are needed. Journal of food protection. June 1979. v. 42 (6). p. 496-501,475. ill. 68 ref.

0866

Agreement with Japan (on inspection and fumigation procedures to prevent introduction of *Mayetiola destructor*) to boost U.S. hay exports. Timothy hay shipments resume. Washington, D.C., The Service. Foreign agriculture. United States. Foreign Agricultural Service. Nov 1979. v. 17 (20). p. 16-17. ill. (NAL Call No.: A281.9 F76F0).

0867

Timothy hay--Japan market reopens (following export fumigation to prevent introduction of *Mayetiola destructor* from Washington). Martin, W.W. Washington, D.C., Science and Education Administration, U.S. Dept. of Agriculture. Agricultural research. United States. Dept. of Agriculture. Oct 1979. v. 28 (4). p. 12-13. ill. (NAL Call No.: 1.98 AG84).

0868

**Alfalfa and herbicides (Increase of root-knot nematode damage).**  
Yarris, L. SEA-WO-AR-W. Washington, D.C., The Administration. Agricultural research - U.S. Department of Agriculture, Science and Education Administration. Aug 1980. v. 29 (2). p. 16. (NAL Call No.: 1.98 AG84).

0869

**Alfalfa weed control : cultural methods in non-dormant alfalfa / (Don R. Howell and E.S. Heathman).**  
Howell, Don R. Heathman, E. S. Tucson University of Arizona, Cooperative Extension Service 1979. Caption title ~Pesticide Applicator Training collection ~"Q367.". 3 p. ill. ; 28 cm. (NAL Call No.: SB608.A5H68).

0870

**Alfalfa yield response to a between-cutting contact herbicide (Paraquat).**  
Wolf, D.D. Foy, C.L. Madison, Wis. : Crop Science Society of America. Crop science. July/Aug 1984. v. 24 (4). p. 645-648. Includes references. (NAL Call No.: 64.8 C883).

0871

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George, D.A. Rincker, C.M. College Park, Md., Entomological Society of America. Journal of economic entomology. Apr 1982. v. 75 (2). p. 319-323. 10 ref. (NAL Call No.: 421 J822).

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**Simulation of adult emergence for the alfalfa blotch leafminer (Diptera: Agromyzidae): interaction of environmental temperature and individual developmental rate variation (*Agromyza frontella*).**

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**Effects of the insect growth regulator hydroprene on nondiapausing *Microctonus aethiopoides* (Hymenoptera: Braconidae), a parasite of the alfalfa weevil (Coleoptera: Curculionidae) (*Hypera postica*).**

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Fusco, Robert A. (Robert Angelo), 1941. 1971. Thesis (Ph.D.)--Pennsylvania State University, 1971. Photocopy of typescript. Ann Arbor: University Microfilms, 1972. iv, 98 leaves ; 21 cm. Bibliography: leaves (93)-98. (NAL Call No.: DISS 72-9,463).

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**Effect of overeating, vaccine and Ralgro on lamb performance when grazing alfalfa pasture (*Clostridium perfringens* type C&D strain).**

Hamill, R.F. CD. Swanson, V.B.; Skwara, J.E. Ft. Collins, Colo., The Station. Progress report - Colorado State University Experiment Station. July 1980. July 1980. (7). 2 p. (NAL Call No.: 100 C71C).

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**Mapping of BamHI and SmaI DNA restriction sites on the genome of the nuclear polyhedrosis virus of the alfalfa looper, Autographa californica.**  
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**A study of chalkbrood disease and viral infection of the alfalfa leafcutting bee / by Kevin James Hackett.**  
Hackett, Kevin James. 1980. Thesis (Ph.D.)--University of California, Berkeley, 1980. Photocopy. Ann Arbor, Mich. : University Microfilms International, 1983. xvi, 483 p. : ill. ; 21 cm. Bibliography: p. 472-483. (NAL Call No.: DISS 80-29,416).



# ANIMAL DISEASES - PHYSIOLOGICAL

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**Effects of dietary energy, free choice alfalfa hay and mass medication on calves subjected to marketing and shipping stresses.**

Lofgreen, G.P. Stinocher, L.H.; Kiesling, H.E. Champaign, Ill., American Society of Animal Science. Journal of animal science. Apr 1980. v. 50 (4). p. 590-596. ill. 10 ref. (NAL Call No.: 49 J82).

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**Nevada hays & grass tetany (Cattle).**

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# ANIMAL DISORDERS - PHYSICAL TRAUMA

1093

**An attempt at detoxifying sweetclover contaminated with dicoumarol (Hay or green manure crop in North Dakota, toxic to livestock).**

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**Cantharidin (blister beetle) poisoning (Epicauta spp., alfalfa).**

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**Cantharidin toxicosis in horses (Alfalfa hay, Harpalus, Epicauta pennsylvanica).**

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**High pressure liquid chromatographic determination of cantharidin, using a derivatization method in specimens from animals (rabbit, rat, goat, sheep, and pony) acutely poisoned by ingestion of blister beetles, Epicauta lemniscata (with alfalfa hay).**

Ray, A.C. Tamulinas, S.H. Schaumburg, Ill., American Veterinary Medical Association. American journal of veterinary research. Apr 1979. v. 40 (4). p. 498-504. ill. 19 ref. (NAL

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1102

**Mechanical and chemical conditioning to speed  
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Rotz, C.A. Thomas, J.W.; Johnson, T.R.;  
Herrington, D.A. St. Joseph, Mich. : The  
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1103

**Wildlife habitat program for private lands.**  
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guidelines for these are explained, they are  
establishing permanent cover, protecting  
existing cover, planting clover with small  
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1105

**Effects of overirrigation on growth and quality of alfalfa.**

Peterschmidt, N.A. Delaney, R.H. Madison, The Society. Agronomy journal American Society of Agronomy. Sept/Oct 1979. v. 71 (5). p. 752-754. ill. 11 ref. (NAL Call No.: 4 AM34P).

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**Irrigated alfalfa: potassium deficiency in semi-arid soils (Evapotranspiration, leaching, Utah).**

James, D.W. Atlanta, Ga. : Potash & Phosphate Institute. Better crops with plant food. Summer 1984. v. 68. p. 24-25. ill. (NAL Call No.: 6 B46). 87 PAGES. (NAL Call No.: 82-0397D). 95 PAGES. (NAL Call No.: 83-0439F).

1107

**WATERSHED PLAN FOR TURKEY CREEK WATERSHED IN ALFALFA, GARFIELD, KINGFISHER, AND MAJOR COUNTIES, OKLAHOMA.**

ALFALFA COUNTY CONSERVATION DISTRICT. STILLWATER, OKLAHOMA DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE JUNE 1983 (EPA: JUNE 20, 1983). (PUR)IMPLEMENTATION OF A FLOOD CONTROL AND WATERSHED PROTECTION PLAN FOR THE 244,006-ACRE TURKEY CREEK WATERSHED IN ALFALFA, GARFIELD, KINGFISHER, AND MAJOR COUNTIES OF NORTH CENTRAL OKLAHOMA IS PROPOSED. THE PLAN WOULD INVOLVE CONSTRUCTION OF 11 FLOODWATER-RETARDING STRUCTURES AND DEVELOPMENT OF WILDLIFE MITIGATION MEASURES ON 43.5 ACRES OF LAND OVER A SIX-YEAR PERIOD. APPROXIMATELY 62 STAFF-YEARS OF TECHNICAL ASSISTANCE WOULD BE PROVIDED TO FURTHER PLANNING GOALS. THE FLOODWATER-RETARDING STRUCTURES WOULD BE COMPACTED EARTH FILL EMBANKMENTS; BARRROW MATERIAL WOULD BE TAKEN MOSTLY FROM AREAS BELOW THE SPILLWAY CREST. ALL PRINCIPAL SPILLWAYS WOULD CONSIST OF DROP-INLET STRUCTURES WITH STANDARD OPEN-TOP CONCRETE RISERS AND CONCRETE CONDUITS. EMERGENCY SPILLWAYS WOULD BE FORMED OF ROCK OR VEGETATED EARTH. ALL STRUCTURES WOULD OPERATE AUTOMATICALLY, WITH FLOODWATER BEING TEMPORARILY STORED IN DETENTION POOLS AND RELEASED AT A CONTROLLED RATE THROUGH THE PRINCIPAL SPILLWAYS. NINE OF THE STRUCTURES WOULD CONTROL THE 25-YEAR FREQUENCY STORM, WHILE THE REMAINING STRUCTURES WOULD CONTROL THE 50-YEAR FREQUENCY STORM. WATER INITIALLY RETAINED IN THE SEDIMENT POOLS WOULD BE DISPLACED BY SEDIMENT OVER THE 100-YEAR LIFE OF EACH STRUCTURE. LAND RIGHTS WOULD BE ACQUIRED ON THE 43.5 ACRES TO BE MANAGED FOR MITIGATION

OF IMPACTS TO WILDLIFE HABITAT. MITIGATION LANDS WOULD INCLUDE 13 ACRES OF RANGELAND, 18 ACRES OF TIMBERLAND, AND 12.5 ACRES OF CROPLAND AND/OR PASTURE. COST OF THE PROJECT IS ESTIMATED AT \$4.6 MILLION, AND THE ESTIMATED BENEFIT-COST RATIO IS 1.24. (PDS) OPERATION OF THE FLOOD CONTROL STRUCTURES WOULD REDUCE FLOODWATER DAMAGE TO 17,598 ACRES OF AGRICULTURAL LAND, REDUCE FLOODING IN THE TOWN OF OVER, REDUCE SEDIMENT DEPOSITION DOWNSTREAM OF THE STRUCTURES, AND MAINTAIN THE ENVIRONMENTAL QUALITY OF THE WATERSHED. AVERAGE ANNUAL SAVINGS RESULTING FROM FLOOD PROTECTION PROVIDED TO THE TOWN WOULD AMOUNT TO \$7,790, WHILE AVERAGE ANNUAL SAVINGS RESULTING FROM AGRICULTURAL FLOOD. USDA EMPLOYEES REQUEST DOCUMENTS FROM NATIONAL AGRICULTURAL LIBRARY OTHERS ORDER FROM INFORMATION RESOURCES PRESS, 1700 NORTH MIDDLE STREET, SUITE 700, ARLINGTON, VA 22209.

1108

**WATERSHED PLAN FOR TURKEY CREEK WATERSHED IN ALFALFA, GARFIELD, KINGFISHER, AND MAJOR COUNTIES, OKLAHOMA.**

ALFALFA COUNTY CONSERVATION DISTRICT. STILLWATER, OKLAHOMA DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE APRIL 1982 (EPA: APRIL 20, 1982). (PUR)IMPLEMENTATION OF A FLOOD CONTROL AND WATERSHED PROTECTION PLAN ON THE 244,006-ACRE TURKEY CREEK WATERSHED IN ALFALFA, GARFIELD, KINGFISHER, AND MAJOR COUNTIES OF NORTH CENTRAL OKLAHOMA IS PROPOSED. THE PLAN WOULD INVOLVE CONSTRUCTION OF 11 FLOODWATER-RETARDING STRUCTURES AND DEVELOPMENT OF WILDLIFE MITIGATION MEASURES ON 43.5 ACRES OF LAND OVER A SIX-YEAR PERIOD. APPROXIMATELY 62 STAFF-YEARS OF TECHNICAL ASSISTANCE WOULD BE PROVIDED TO FURTHER PLANNING GOALS. THE FLOODWATER-RETARDING STRUCTURES WOULD BE COMPACTED EARTH FILL EMBANKMENTS, AND BARRROW MATERIAL WOULD BE TAKEN MOSTLY FROM AREAS BELOW THE SPILLWAY CREST. ALL PRINCIPAL SPILLWAYS WOULD CONSIST OF DROP-INLET STRUCTURES WITH STANDARD OPEN-TOP CONCRETE RISERS AND CONCRETE CONDUITS. EMERGENCY SPILLWAYS WOULD BE FORMED OF ROCK OR VEGETATED EARTH. ALL STRUCTURES WOULD OPERATE AUTOMATICALLY, WITH FLOODWATER BEING TEMPORARILY STORED IN DETENTION POOLS AND RELEASED AT A CONTROLLED RATE THROUGH THE PRINCIPAL SPILLWAYS. NINE OF THE STRUCTURES WOULD CONTROL THE 25-YEAR FREQUENCY STORM, WHILE THE REMAINING STRUCTURES WOULD CONTROL THE 50-YEAR FREQUENCY STORM. WATER INITIALLY RETAINED IN THE SEDIMENT POOLS WOULD BE DISPLACED BY SEDIMENT OVER THE 100-YEAR LIFE OF EACH STRUCTURE. LAND RIGHTS WOULD BE ACQUIRED ON THE 43.5 ACRES TO BE MANAGED FOR MITIGATION OF IMPACTS TO WILDLIFE HABITAT. MITIGATION LANDS WOULD INCLUDE 13 ACRES OF RANGELAND, 18 ACRES OF TIMBERLAND, AND 12.5 ACRES OF CROPLAND AND/OR PASTURE. COST OF THE PROJECT IS ESTIMATED AT \$4.3 MILLION, AND THE ESTIMATED BENEFIT-COST RATIO IS 1.27. (PDS) OPERATION OF THE FLOOD CONTROL STRUCTURES WOULD REDUCE FLOODWATER DAMAGE TO 17,598 ACRES OF AGRICULTURAL LAND, REDUCE FLOODING IN THE TOWN OF OVER, REDUCE SEDIMENT DEPOSITION DOWNSTREAM OF THE STRUCTURES, AND MAINTAIN THE ENVIRONMENTAL QUALITY OF THE WATERSHED. AVERAGE ANNUAL SAVINGS RESULTING FROM FLOOD PROTECTION

## **(WATER RESOURCES AND MANAGEMENT)**

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FROM INFORMATION RESOURCES PRESS, 1700 NORTH  
MOORE STREET, SUITE 700, ARLINGTON, VA 22209.



# DRAINAGE AND IRRIGATION

1109

## Volatilization of S-ethyl

N,N-dipropylthiocarbamate from water and wet soil during and after flood irrigation of an alfalfa field.

Clath, M.M. AR-W. Spencer, W.F.; Farmer, W.J.; Shoup, T.D.; Grover, R. Washington, D.C., American Chemical Society. Journal of agricultural and food chemistry. May/June 1980. v. 28. May/June 1980. v. 28 (3). p. 610-613. 111. 18 ref. (NAL Call No.: 381 J8223).

1110

**Chemical preservation of alfalfa juice protein  
(Food or feed material).**

Straub, R.J. Barrington, G.P.; Bruhn, H.D.;  
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# FOOD COMPOSITION, FIELD CROP

1111

Yield, chemical composition, and feeding value  
for milk production of alfalfa hay cut at three  
stages of maturity by J.R. Dawson, D.V.  
Kopland, and R.R. Graves.

Dawson, J. R. Washington, D.C. U.S. Dept. of  
Agriculture 1940. 52 p. : 111. -. Bibliography:  
p. 50-51. (NAL Call No.: Fiche S-69 no.739).



# FEED PROCESSING AND STORAGE

1112

**Chemical conditioning to speed alfalfa drying.**  
Rotz, C.A.AFGCA. Thomas, J.W. Lexington : The Council. Proceedings - American Forage and Grassland Council. 1983. Paper presented at the Forage and Grassland Conference on "Use Home Grown Forages for Profit and Conservation", Civic Center, Eau Claire, Wisconsin, Jan 23-26, 1983. 1983. p. 163-169. Includes references. (NAL Call No.: 60.19 J66).

1113

**Economics of chemical conditioning of alfalfa.**  
Rotz, C.A. Lexington, Ky. : American Forage and Grassland Council. Proceedings of the Forage and Grassland Conference. 1984. Paper presented at the 1984 Forage and Grassland Conference on Forage Systems: Leading U.S. Agriculture into the Future, January 23-26, 1984, Houston, Texas. 1984. p. 278-282. Includes references. (NAL Call No.: 60.19 J66).

1114

**Economics of chemically-conditioned alfalfa on Michigan dairy farms.**  
Rotz, C.A. St. Joseph, Mich. : The Society. Paper - American Society of Agricultural Engineers (Microfiche collection). 1983. Paper presented at the 1983 Winter Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950 Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices. 1983. (fiche no. 83-1640). 1 microfiche : ill. Includes references. (NAL Call No.: FICHE S-72).

1115

**Hastening drying rate of cut alfalfa with chemical treatment.**  
Wieghart, M. Thomas, J.W.; Tesar, M.B. Champaign, Ill.; American Society of Animal Science. Journal of animal science. July 1980. v. 51 (1). p. 1-9. ill. 19 ref. (NAL Call No.: 49 J82).

1116

**Quality of alfalfa hay chemically treated at cutting to hasten field drying.**

Johnson, T.R.JDSCA. Thomas, J.W.; Rotz, C.A.  
Champaign : American Dairy Science Association.  
Journal of dairy science. May 1983. v. 66 (5).  
p. 1052-1056. Includes references. (NAL Call  
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- 1117
- Bovine salmonellosis attributed to *Salmonella anatum*-contaminated haylage and dietary stress.**  
Glickman, L.T. McDonough, P.L.; Shin, S.J.; Fairbrother, J.M.; LaDue, R.L.; King, S.E. Schaumburg, Ill., The Association. Journal of the American Veterinary Medical Association. June 15, 1981. v. 178 (12). p. 1268-1272. 12 ref. (NAL Call No.: 41.8 AM3).
- W.M.; Harris, T.M. Washington, D.C. : American Society for Microbiology. Applied and environmental microbiology. Aug 1984. v. 48 (2). p. 386-388. ill. Includes references. (NAL Call No.: DNAL 448.3 AP5).
- 1118
- Cantharidin (blister beetle) poisoning (*Epicauta* spp., alfalfa).**  
Panciera, R.J. Santa Barbara, Calif. : American Veterinary Publications, 1982. Equine medicine and surgery, 3rd ed. / edited by R.A. Mansmann, E.S. McAllister ; P.W. Pratt, book editor. p. 203-204. ill. 7 ref. (NAL Call No.: SF951.E6 1982).
- 1119
- Cantharidin toxicosis in horses (Alfalfa hay, *Harpalus*, *Epicauta pennsylvanica*).**  
Wolf, G.A. JAVMA. Fischer, D.C.; Edwards, W.C. Schaumburg : The Association. Journal - American Veterinary Medical Association. Feb 1, 1983. v. 182 (3). p. 283-284. ill. 13 ref. (NAL Call No.: 41.8 AM3).
- 1120
- Development of an analytical procedure for an insect growth regulator (EL-494) (N-(((5-(4-bromophenyl)-6-methyl-2-pyrazinyl)amino)carbonyl)-2,6-dichlorobenzamide) employing high-pressure liquid chromatography and its application on residues in alfalfa.**  
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- 1121
- Experimental cantharidiasis in the horse.**  
AJVRAH. Shawley, R.V. Rolf, L.L. Jr. Schaumburg, Ill. : American Veterinary Medical Association. American journal of veterinary research. Literature review. Nov. 1984. v. 45 (11). p. 2261-2266. Includes 57 references. (NAL Call No.: DNAL 41.8 AM3A).
- 1122
- Identification of swainsonine as a probable contributory mycotoxin in moldy forage mycotoxicoses *Rhizoctonia leguminicola*, Slobber syndrome, red clover hay, slaframine, *Swainsona canescens*.**  
APMBA. Broquist, H.P. Mason, P.S.; Hagler,



# FEED COMPOSITION

1123

**Chemical composition and in vivo nutrient digestibility of guinea and merker grass hays (*Panicum maximum*, *Pennisetum purpureum*, steers, and goat and sheep wethers).**

Arroyo-Aguilu, J.A. PR. Oporta-Tellez, J.A. Rio Piedras, The Station. The Journal of agriculture of the University of Puerto Rico - Puerto Rico, Agricultural Experiment Station. July 1980. v. 64 (3). p. 294-303. ill. 24 ref. (NAL Call No.: 8 P832J).

1124

**Chemical preservation of alfalfa juice protein (Food or feed material).**

Straub, R.J. Barrington, G.P.; Bruhn, H.D.; Koegel, R.G. St. Joseph, Mich. : The Society. Paper - American Society of Agricultural Engineers (Microfiche collection). 1982. Paper presented at the 1982 Winter Meeting of the American Society of Agricultural Engineers. Available for purchase from: The American Society of Agricultural Engineers, Order Dept., 2950 Niles Road, St. Joseph, Michigan 49085. Telephone the Order Dept. at (616) 429-0300 for information and prices. 1982. (fiche no. 82-1539). 1 microfiche : ill. Includes references. (NAL Call No.: FICHE S-72).

1125

**Effects of storage method on losses and quality changes in round bales of ryegrass and alfalfa hay.**

Nelson, B.D.LAXBA. Verma, L.R.; Montgomery, C.R. Baton Rouge : The Station. Bulletin - Louisiana Agricultural Experiment Station. June 1983. June 1983. (750). 19 p. ill. Includes references. (NAL Call No.: 100 L93 (1)).

1126

**Forage quality for sheep and chemical composition associated with sulfur fertilization on a sulfur deficient site (*Trifolium subterraneum*, *Lolium multiflorum*).**  
Jones, M.B. Rendig, V.V.; Torell, D.T.; Inouye, T.S. Madison, Wis., American Society of Agronomy. Agronomy journal. Sept/Oct 1982. v. 74 (5). p. 775-780. ill. 19 ref. (NAL Call No.: 4 AM34P).

1127

**Grading alfalfa hay with chemical analysis.**  
Fonnesbeck, P.V. Anderson, M.J. (Champaign, Ill. : distributed by the American Society of Animal Science, 1981). Joint meeting / Canadian Society of Animal Science, Western Branch (and) American Society of Animal Science, Western Section, Vancouver, B.C., Canada, June 23rd-25th, 1981. p. 214-217. 6 ref. (NAL Call No.: SF5.C35 1981).

1128

**Grading and/or testing treated hays (with chemicals).**

Baker, R.J. Lexington, Ky. : American Forage and Grassland Council. Proceedings of the Forage and Grassland Conference. 1984. Paper presented at the 1984 Forage and Grassland Conference on Forage Systems: Leading U.S. Agriculture into the Future, January 23-26, 1984, Houston, Texas. 1984. p. 53-60. Includes references. (NAL Call No.: 60.19 J66).

1129

**How does your hay stack up? (Grading, chemical analysis).**

Fonnesbeck, P.V. UT-AR-W. Lamborn, R.E.; Anderson, M.J. Logan, The Station. Utah Science - Utah Agricultural Experiment Station. Utah. Agricultural Experiment Station. Spring 1980. v. 41 (1). p. 1-6. ill. 4 ref. (NAL Call No.: 100 UT1F).

1130

**Quality of alfalfa hay chemically treated at cutting to hasten field drying.**

Johnson, T.R.JDSCA. Thomas, J.W.; Rotz, C.A. Champaign : American Dairy Science Association. Journal of dairy science. May 1983. v. 66 (5). p. 1052-1056. Includes references. (NAL Call No.: 44.8 J822).

1131

**Red clover: *Trifolium pratense* (Cultural practices, chemical composition of forage).**

Taylor, N.L. Smith, R.R. Boca Raton, Fla., CRC Press. CRC handbook of biosolar resources. 1981. v. 2. p. 11-21. map. 37 ref. (NAL Call No.: TP360.C7).

1132

**Use of urea to ammoniate coastal bermudagrass hay.**

LPPPB. Craig, W.M. Ulloa, J.A. Baton Rouge, La. : The Department. Livestock producers' day report - Louisiana Agricultural Experiment Station, Animal Science Department. 1984. v. 25. p. 129-132. Includes references. (NAL Call No.: DNAL 43.9 L932).

1133

**Alfalfa management strategies for a Wisconsin dairy farm--an application of stochastic dominance.**

McGuckin, T. Fargo : North Dakota State University. Extract: Alternative management practices are evaluated by stochastic dominance for a representative dairy farm in Wisconsin. Analysis of harvesting schedules, integrated pest management, and harvesting technology indicates that a mid-bud cutting schedule using silage technology achieves maximum income at a minimum risk. An additional benefit is reduced pesticide applications. North Central journal of agricultural economics. Jan 1983. v. 5 (1). p. 43-49. Includes 16 references. (NAL Call No.: HD1773.A3N6).

1134

**A computer simulation model for the alfalfa blotch leafminer (*Agromyza fontella*).**

Mellors, W.K. Ithaca, N.Y., The Station. Search agriculture - New York State Agricultural Experiment Station, Ithaca. 1981. 1981. (20). 16 p. Includes 11 ref. (NAL Call No.: S95.E23).

1135

**Catalogue of the types in the New York State Museum insect collection / Timothy L. McCabe and Linnea M. Johnson.**

McCabe, Timothy L. Johnson, Linnea M. Albany  
The University of the State of New York, State  
Education Dept. 1980. 38 p. ; 28 cm. -. (NAL  
Call No.: 500 N48B No.434).

1136

**Clover mites.**

Thompson, Lynne C. 1978. This publication  
discusses the life history and habits of clover  
mites and their chemical and non chemical  
control. Document available from: Distribution  
Center, Umberger Hall, Kansas State Univ.,  
Manhattan, KS 66506. 1 sheet : ill. (NAL Call  
No.: AF 8).



# INSECT PESTS AND CONTROL, ANIMALS AND MAN

1137

High pressure liquid chromatographic determination of cantharidin, using a derivatization method in specimens from animals (rabbit, rat, goat, sheep, and pony) acutely poisoned by ingestion of blister beetles, *Epicauta lemniscata* (with alfalfa hay).

Ray, A.C. Tamulinas, S.H. Schaumburg, Ill., American Veterinary Medical Association. American journal of veterinary research. Apr 1979. v. 40 (4). p. 498-504. ill. 19 ref. (NAL Call No.: 41.8 AM3A).

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